Calculus I

HNRS 2413.001 | Fall 2022

Instructor: Dr. Deborah Koslover
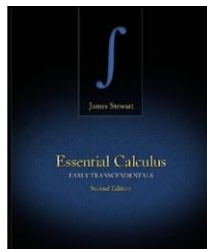
Office: RBN 4010

Email: dkoslover@uttyler.edu

Classroom: RBN 4021

Meeting Time: MWF 10:30 – 11:45 AM

Office Hours: M 12:30 – 1:15 PM, TTh 1 – 1:50, W 2:30-3:30 or by appointment.

Course Description

At its heart, Calculus I is merely the study of finding the slopes of lines and the area of regions. Yet, Calculus allows us to solve many problems in the fields of engineering, the physical sciences, economics and a great many others. In order to study calculus, we must take an in-depth look at what is meant by tangent lines, growth rates, areas and what happens as numbers go to infinity. To address these topics we will pursue a study of functions, limits, continuity, and differentiation of algebraic and trigonometric functions, applications of the derivative, definite and indefinite integrals with applications. We will be covering most of Chapters 1 -5. Some sections may be skipped due to time constraints. Prerequisites: Invitation by the Honors Program. Students cannot receive credit for both HNRS 2413 and MATH 2413

Textbook

Essential Calculus Early Transcendentals, by James Stewart, Brooks/Cole, Cengage Learning, 2013, Second Edition, ISBN – 10: 1-133-11228-5, ISBN – 13:978-1-133-11228-0

Website
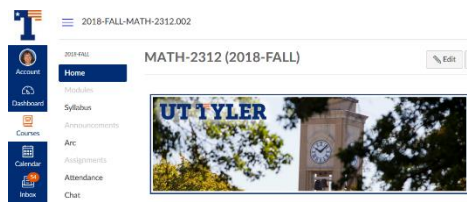
You will be using Canvas. Go to www.uttyler.edu/canvas to log into Canvas using your regular patriots account. If you have enrolled in the course, you should have access to the website. You will find important documents, grades, lecture notes, and announcements on Canvas.

Attendance is mandatory and attendance records will be kept. Notify Dr. Koslover in advance if you must miss a class, be late for a class or leave early. (Official University Policy: Class attendance is the responsibility of the student. When a student has a legitimate absence, the instructor may permit the student to complete missed assignments. In many cases class participation is a significant measure of performance, and non-attendance may adversely affect a student's grade. When a student's absences become excessive, the instructor may recommend that the student initiate a withdrawal.)

Learning Outcomes

At the conclusion of this course, you will be able to

1. Discuss the solution to the tangent and area problems involving the calculus concepts of limits, derivatives, and integrals.

2. Use graphs of algebraic and transcendental functions to determine limits, continuity, and differentiability at a point.

3. Determine whether a function is continuous and/or differentiable at a point using limits.

4. Apply differentiation rules to differentiate algebraic and transcendental functions.

5. Choose appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.

6. Compute definite integrals using the Fundamental Theorem of Calculus.

7. Recognize and discuss the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.
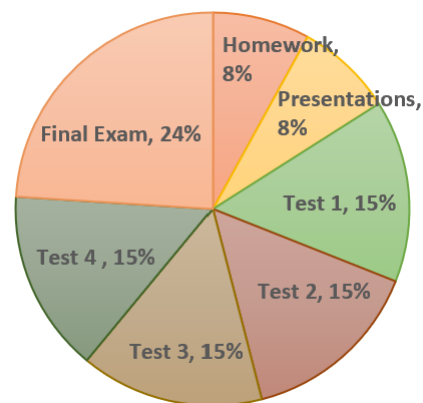
Course Evaluation

At the end of the semester, you will find your final grade on my.uttyler.edu. It will also be posted on Canvas.
A final course grade of

90% is guaranteed to be at least an A
80% is guaranteed to be at least a B
70% is guaranteed to be at least a C
60% is guaranteed to be at least a D.

All grades below 60% will be F.

Homework, 8%
Presentations, 8%
Final Exam, 24%
Test 1, 15%
Test 2, 15%
Test 3, 15%
Test 4, 15%

The Plan

Homework **Presentations** Presentations (8%) and homework (8%)
Homework will be assigned daily. Assignments
will appear on Canvas. Some homework will come from your textbook and some from other
sources. Homework will be due on Wednesday of the following week at 5 AM. Homework
must be turned on Canvas. A link will be posted on Canvas for you to submit your assignments.
You must scan your homework and submit it as a pdf file. Some free phone scanners are posted
on Canvas. Photographs will not be accepted. Homework will be graded for completion. Make
sure you write your solutions neatly as they will be used in your presentations.

Homework, in the form of presentations, will be due on Friday one week after it is assigned,
except on Friday, September 9 when we have a test. Those presentations will take place
Monday, September 12. Students will be asked to get up and present one or two problems. You
may show your paper from the page posted on Canvas or write your solutions on the board. You
will be graded on correctness of work, clarity of presentation and your answers to questions
asked. Each student will be allowed one "pass" per class but will receive a zero on the
assignment if they ask for two passes.

Students watching the presentations will be awarded points for insightful questions or comments.
If you have done a problem in a significantly different fashion than the presenter, you may ask to
show your solutions for credit.

Solutions will be posted on Canvas. I will make copies of good clear answers written by
your fellow students. Do not sell answers to Chegg or similar websites. Do not pass down
the solutions to future generations of students.

TESTS There will be four tests (15% each) and a final exam (24%). These exams will test
your knowledge of the material taught in the class and practiced on the homework.
Test problems will be similar to homework problems, but generally shorter. The final exam will
be comprehensive, but will emphasize material in the final third of the course. Answers will be
worth almost nothing, only the solutions matter. Credit will only be given for use of Calculus
techniques to solve problems.
    The dates and times of these exams are as follows:
- **Test 1**: Friday, September 9, 2022
- **Test 2**: Wednesday, September 28, 2022
- **Test 3**: Wednesday, October 19, 2022
- **Test 4**: Wednesday, November 9, 2022

FINAL EXAM

**Final Exam**: Wednesday, December 7, 2022, 10:15 AM – 12:15 PM

Make-ups

Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, 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 such as hospitalization and at the sole discretion of the instructor.

Make-ups will be allowed for the following excused absences.
1) Illnesses, with a doctor's note, no exceptions.
2) Your child's illness, with a doctor's note.
3) Court appearances, including citizenship court, with documentation
4) Weddings, funerals or military advancement with documentation **and** a photograph showing that you attended the event.

Other Details
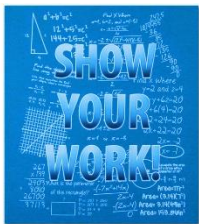
Calculator Policy: No calculators or other electronic devices may be used on tests or the final exam. During the exam, you must place your cell phone on the desk where it is visible. If you need to use the restroom during the exam, you must leave your phone on the desk or with the professor.

Cell phones, IPODs and other electronic devices: Please set your cell phones and pagers to silent mode. If you are expecting an emergency call, please notify the instructor in advance, sit near the door, and answer the phone outside. You will not be allowed to wear an IPOD or other electronic devices during an exam. During tests, cell phones must be turned off and placed in sight on your desk. If you need to use the restroom during the exam, you must leave your phone on the desk or with the professor.

Covid Related Issues

Let me know if you will be missing class, before class if possible. If we have class cancellations or if the university gets shut down, I may move test or quiz dates. I will email you and post an announcement on Canvas in these circumstances. If we get into a situation where we have to do online tests or quizzes, you will need a camera and microphone. I must be able to see your face during the exam. Your phone will work, but it will be easier for you if you can use your computer. Additionally, in this case, some tests may be changed to projects.

If you have any special concerns, problems or other issues, please let me know as soon as possible so that we can craft solutions.

PASS TUTORING SERVICE

Tutor Joseph Peery
Email jpeery@uttyler.edu
Office LIB 401 at the Muntz Library
Office Hours TTh 1 – 6 PM

Calendar

AUGUST

MON	WED	FRI
22	24	26
First Day		
29	31 HW 1	

December 5
Final Exam
12:30 - 2:30 PM

SEPTEMBER

MON	WED	FRI
		2 Census date P1
5 Labor Day	7 HW 2	9 Test 1
12 P2	14 HW3	16 P3
19	21 HW 4	23 P4
26	28 Test 2 HW 5	30 P5

OCTOBER

MON	WED	FRI
3	5 HW 6	7 P6
10	12	14
	HW 7	P7
17	19 Test 3 HW 8	21 P8
24	26 HW 9	28 P9
31		

NOVEMBER

MON	WED	FRI
	2 HW 10	4 Drop Day P10
7	9	11
	Test 4 HW 11	P11
14	16 HW 12	18 P12
21	23	25
	Thanksgiving	
28	30 HW 13	Dec 2 P13