

MATH 181
CALCULUS AND ANALYTIC GEOMETRY
Winter 2019

Professor: Frank V. Tran
Office: 61 -1632
E-mail: frank@mtsac.edu
Phone: (909)594-5611 Ext. 5311

Website: <http://faculty.mtsac.edu/frank>

Materials Required

Text: *Calculus Early Transcendentals, 8th Edition by James Stewart*
Calculator: *A scientific or graphing calculator.*

Student learning Outcome: *SLO are under the department website:*
http://www.mtsac.edu/math/slo_math.html

Topics to be covered:

1. Use definite integrals to calculate areas between curves, volumes - including solids of revolution, work, the mean value of functions, arc lengths, areas of surfaces of revolution, moments, centers of mass, and other physics applications.
2. Evaluate indefinite and definite integrals (proper and improper) using integration by parts, trigonometric identities and substitutions, partial fractions, tables, computer algebra systems and numerical techniques.
3. Solve separable and first order linear differential equations with applications.
4. Plot curves parametrically and in polar coordinates, using calculus to compute associated areas, arc-lengths and slopes.
5. Test for convergence for sequences and series using the integral, comparison, alternating series, ratio, and root tests.
6. Determine representations of functions as power series including Taylor and Maclaurin series.
7. Use power series in applications.

Homework

The completion of daily homework is critical to your success in this course. Homework will be assigned every lecture, and they are NOT going to be collected, but there will be similar problems from the homework assignment on quizzes and exams. It is very important both for your understanding of the material and for preparing for exams that you work all the assigned problems as soon as the material covered in class.

Quizzes

There will be about 4 quizzes. All quizzes are consisting of problems similar to the homework and examples in lectures. There will be no makeup quizzes. At the end of the semester, the highest 3 quiz grades will be used.

Class Attendance

Attendance at each class meeting is expected and is important for your success in the course. A roll sheet will be passed in the second half of the class (after break time) and it's up to you to sign in. A student may be dropped for excessive (more than two) absences. Phones should be set so that they do not ring during class.

Exams

There will be two exams. You may be allowed at most one makeup exam, but only for extreme circumstances such as court, hospital... and must provide legitimated documents for being unable to take the exam at the scheduled time. **You must contact me at least two days before the day of the exam to request a makeup exam.** At the end of the semester, if you have missed no more than **ONE** classes, 85% of your final exam may be used to replace an exam score if this would be advantageous to your course grade. The exams will test your understanding of the concepts covered in the course. Most of the questions on these exams will require showing a significant amount of work to justify your answer. A correct answer with no work shown will be given a zero. The exams will also require you to explain and interpret your results. **Graphing calculator is NOT allowed on any exam.**

Grading

Your semester course grade will be determined by your percentage of the total points possible. You should keep an accurate record of your grades. I will provide information on your grade standing after each exam.

Percentage	
Exams	52%
Final Exam	30%
Quizzes	15%
Maple Projects	3%

The scale used to convert from total points earned to a letter grade will no more stiff than:

Percentage	Grade
90.0 - 100.0	A
80.0 - 89.9	B
70.0 - 79.9	C
60.0 - 69.9	D
Below 60.0	F

Electronic devices:

Cell phones, laptops, tablets, and other devices capable of electronic communication must be turned off during lectures, quizzes, and exams. These devices must not be visible during lectures, quizzes and exams.

As a courtesy to fellow students as well as the instructor, you should remain quiet during class time unless you are asking or answering questions. If you are disrupting the class, you may be given a warning or you may be asked to leave the class.

Accommodations:

Any student who feels he/she may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs so that we can strategize together on ways to help you succeed in this class. . Please contact the DSPS & S at (909) – 274 – 4290 in Student Service Center, Building 9B to coordinate the necessary accommodations. Appointments for taking quizzes and exams at DSP&S must be the same day that the quiz or exam is scheduled.

Academic Honesty

I place a high premium on honesty. Therefore, I consider cheating a serious offense, not only to me, and to other students, but ultimately to the cheater. If a student cheats on an exam, either by copying another student's work or by using a cheating device (notes on paper, clothing, desk, est....) and I catch him or her, I will address it by either giving them an F for the exam, an F for the entire course, or asking the school to dismiss the student.

Week #	Date	Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan. 7 - 11	7.1 – 7.3	7.4 – 7.6	7.7 – 7.8 Quiz #1		
2	Jan. 14 – 18	6.1 – 6.2	6.3 – 6.4	6.5 Exam #1		
3	Jan. 21 – 25	Holiday	8.1 – 8.3	9.1 – 9.3 Quiz #2		
4	Jan. 28 Feb. 1	10.1 – 10.2	10.3 – 10.4	11.1 Exam #2		
5	Feb. 4 - 8	11.2 – 11.4	11.5 – 11.7	11.8 Quiz #3		
6	Feb. 11 – 15	11.9 – 11.11	Quiz #4 Review	Final exam		