

MATH 180
CALCULUS AND ANALYTIC GEOMETRY
Winter 2020

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

Website: <http://elearn.mtsac.edu/fran>

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

- *Limits and Continuity: Rates of change and limits, calculating limits using limit laws, precise definition of a limit, one-sided limits and limits at infinity, infinite limits and asymptotes, continuity, tangents and derivatives.*
- *Differentiation: The derivative as a function, differentiation rules, derivatives of trig functions, the chain rule and parametric equations, implicit differentiation, derivatives of inverse functions and logarithms, inverse trig functions, related rate problems, linearization and differentials.*
- *Applications of derivatives: extreme values of functions, Mean Value Theorem, First derivative test, concavity and curve sketching, applied optimization problems, indeterminate forms and L'Hopital's rule, Newton's Method, Antiderivatives.*
- *Integration: Estimating with finite sums, sigma notation and limits of finite sums, the definite integral, Fundamental Theorem of Calculus, indefinite integrals and the substitution rule, substitution and area between curves.*
- *Integrals and Transcendental Functions: Logarithm defined as integral, exponential growth and decay, relative rate of growth.*
- *Integration by substitution and by parts.*

Quizzes:

There will be 6 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 5 quiz grades will be used. This allows you to drop about one quiz grade.

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 will be allowed at most one makeup exam, but only for extreme circumstances. If you will be unable to take an exam at the scheduled time, **you must contact me at least two days before the day of the exam to request a makeup exam.** 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	55%
Final Exam	30%
Quizzes	13%
Maple Projects	2%

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. 6 - 10	2.1 – 2.4	2.5 – 2.7	2.8 Quiz #1		
2	Jan. 13 – 17	3.1 – 3.3	3.4 – 3.6 Quiz #2	3.7-3.8 Exam #1		
3	Jan. 20 – 24	Holiday	3.9 – 3.11 4.1	4.2 – 4.3 Quiz #3		
4	Jan. 27 - 31	4.4 – 4.7	4.8 – 4.9 Quiz #4	5.1 Exam #2		
5	Feb. 3 - 7	5.2 – 5.4	5.5 7.1 – 7.2	7.3 – 7.4 Quiz #5		
6	Feb. 10 – 14	7.4 – 7.5	Quiz #6 Review	Final exam		

Last day to drop without “W”: Tuesday, Jan. 7th 2020

Last day to drop with “W”: Tuesday, Jan. 28th 2020