Engineering Calculus 1 - MAC 2281 - Section 005

Spring 2019

Instructor:	Diego Ricciotti	**Lectures:**	Tu Th 2-3:15 p.m.	CPR 120
E-mail:	ricciotti@usf.edu	**Peer Leading:**	Fr 2-2:50 p.m.	CPR 122
Office Location:	CMC 110			
Office Hours:	Tu Th 12:30-1:45 p.m			

Course Description: This course features topics that develop some basic mathematical tools that are used to solve problems in mathematics and the sciences. These include limits, differentiation, differentials, extrema, and indefinite and definite integrals. Most of Chapters 1, 2, 3, 4, and Chapter 5 (sections 5.1 through 5.4) of the text will be covered.

General Education Statement This course is part of the University of South Florida's Foundations of Knowledge and Learning Core Curriculum. It is certified for Mathematics and for the following dimensions: Critical Thinking, Inquiry-based learning, Scientific Processes, and Quantitative Literacy. Students enrolled in this course might be asked to participate in the USF General Education assessment effort. This might involve answering questions that measure quantitative reasoning skills (but are not directly related to the course), responding to surveys, or participating in other measurements designed to assess the FKL Core Curriculum learning outcomes.

Prerequisites: C (2.0) or better in MAC 1114 and C (2.0) or better in MAC 1140, **OR** C (2.0) or better in MAC 1147, **OR** SAT Math score of 650 or better, **OR** ACT Math score of 29 or better, **OR** College-Level Math CPT score of 90 or better, and knowledge of trigonometry

Exam Dates:	Test 1: February 2, 2019	9:00-10:15 a.m.
	Test 2: March 2, 2019	9:00-10:15 a.m.
	Test 3: April 6, 2019	9:00-10:15 a.m.
	Final : April 27, 2019	3:00-5:00 p.m.

Rooms for the tests are to be determined and will be announced in class.

Grade Distribution:	Quizzes	15%	Tests	45% (15% each)
	Homework	10%	Final Exam	20%
	Peer Leading	10%		

Grading Policy: If your overall percentage according to the above weights falls into the following range, you will receive the corresponding grade:

97-100	A+	87-89	B+	77-79	C+	67-69	D+	0-59	F
93-96	A	83-86	B	73-76	C	63-66	D		
90-92	A-	80-82	B-	70-72	C-	60-62	D-		

Text: *James Stewart, Essential Calculus, Early Transcendentals*, 2nd Edition

If you buy your text at the bookstore, you are buying the enhanced edition, which contains an access code to **WebAssign**, the online homework system. On WebAssign, you also have an electronic copy of the textbook, together with other resources. If you did not purchase your book at the bookstore, you will need to separately purchase an online access to WebAssign. You may also choose to only have an electronic version of the book. More details about how to login to WebAssign are on the Canvas course site. You may already have access to WebAssign from a previous semester.

Stewart also maintains a website with additional resources, which you may be interested in: http://www.stewartcalculus.com/media/6_inside_topics.php

Office Hours I hold office hours on Tuesdays and Thursdays, 12:30-1:45 p.m in my office CMC 110. You can just drop in during the hours listed above. Please come to my office to ask me any questions about the class or about the homework! If you need to meet at other times, please send me an e-mail and we can schedule extra office hours.

Course Design Several strategies in the learning process will be applied in this course, such as lectures as well as individual and group in-class inquiry work. You will have access to an online homework system called WebAssign and will submit part of your homework electronically.

Additionally, certain topics will be covered using a flipped model. You will be provided notes or short videos that you will be required to read or watch before coming to class, accompanied by a short online quiz. This way in the following class we can focus on your questions and activities meant to deepen your understanding.

Every Friday, you will work in groups of 3 or 4 on guided inquiry activities that will be led by two undergraduate students, your peer leaders. **Attendance at the peer leading sessions is mandatory**. More detail about your peer led sessions is available in the Peer Leading Syllabus, posted in Canvas.

Course Objectives At the end of this course, you should be able to:

- perform computations involving the following mathematical tools: general exponential and logarithmic functions, limits, derivatives, and integrals;

- use mathematical symbols and language correctly;

- interpret the above mathematical tools in a concrete context;

- apply the mathematical tools learned to model and solve real world problems.

Student learning outcomes At the end of the course, the student will be able to:

- use general exponentials and logarithms to solve equations involving these functions;

- perform differentiation and integration computations involving exponential and logarithmic functions;

- translate a given concrete problem involving exponential and logarithmic growth into mathematical language, solve it, and suitably interpret the answer;

- analyze a graph or manipulate a mathematical expression to find a limit;

- define what it means for a function to be continuous and determine whether a given function is continuous at a point and/or on an interval;

- compute derivatives of functions;

- use the derivatives of a function to analyze the shape and behavior of its graph. In particular, the student will be able to use the derivative of a function to make conclusions about the slopes of the lines tangent to the graph of the function;

- examine a differentiation problem, choose an appropriate method to solve it, and perform the relevant computations;

- find extreme values of functions;

- translate a concrete problem involving optimization into mathematical language, solve it and interpret the answer in context;

- use the connection between antiderivatives and definite integrals; established by the Fundamental Theorem of Calculus, in order to compute integrals;

- express the area of a region as an integral and compute it;

- translate a concrete problem involving areas into mathematical language; solve it, and interpret the answer in context;

- examine an integration problem, choose an appropriate method to solve it, and perform the relevant computations.

Peer Leading Sessions Every Friday, you will work in small groups on guided inquiry activities that will be led by two undergraduate students, your peer leaders.
There will be a pre-assignment due on Canvas before peer leading starts.
There will be a short, multiple choice quiz during your peer leading session.
At the end of your peer led session, you will hand in a critical thinking question. Your critical thinking question will count as a 1/1 if *Satisfactory* and a 0/1 if *Unsatisfactory*.
The two lowest peer led critical thinking grades and quiz grades will be dropped. Your semester's average grade on these quizzes and critical thinking questions will count as your peer leading grade. More details are available in the Peer Leading Syllabus posted on Canvas.

WebAssign This class uses WebAssign, an interactive, online learning and assessment tool, through which you will submit your online homework for this class. WebAssign homework will typically be due each week. It is your responsibility to be aware of each deadline and submit your work on time.
To access the assignments on WebAssign go to http://www.webassign.net. You can also access WebAssign assignments from Canvas.
You have two free weeks of WebAssign access, starting on Monday, January 7, so you can login right away to access the text and start your homework, even if you have not yet purchased your WebAssign access code. You must purchase the WebAssign access code in order to take this class! More information about the various purchase options may be found at `https://www.cengage.com/c/essential-calculus-early-transcendentals-2e-stewart`
Be sure to complete each assignment on time.

Practice problems and Quizzes You will be provided a list of practice problems from the textbook and during lectures. You are expected to solve these problems, although they will not be collected nor graded.

There will be some online quizzes administered through Canvas.
There will be regular quizzes during lecture, either at the beginning or the end of class. It is your responsibility to be on time and you should not expect to receive any time extensions if you are late. Calculators, books or notes will not be allowed for quizzes. There will be no make-up quizzes, instead the lowest score will be dropped.

Exams There will be three class Tests on Saturdays (February 2, March 2, and April 6, 9:00 – 10:15 am) and one cumulative two-hour Final Exam (on Saturday, April 27, from 3 – 5 pm).

Make up work/exam policy Make-up exams will only be given for excused absences. In general, reasons for excused absences include documented illness, deaths in the immediate family and other documented crises, call to active military duty, court-imposed legal obligations (e.g., jury duty and subpoenas), religious days, special requirements of other courses and university sponsored events (e.g., performances, games/meets, judging trips, field trips), and severe weather conditions. Employment schedules, family reunions, vacations and athletic training/practice schedules of students do not comprise a valid excuse for absences. Also, students must notify their instructors of scheduled absences (for approved reasons as noted above) at the beginning of each academic term. Pointing out specific conflicts with scheduled examinations or other scheduled assignments/activities should be part of this notification. In the event of an emergency unscheduled absence (as described above), students must contact their instructors as soon as possible and provide documentation if required. Extended illnesses may interfere with the satisfactory completion of courses, and in such cases a student should contact his or her college by the deadline to drop a course. After the drop deadline, students may submit an Academic Regulations Committee (ARC) petition with proper documentation to drop a course or withdraw for medical reasons. Students may find additional information through their college ARC representative. An instructor may determine that missing a certain amount of participation-dependent activities (whether excused or not) precludes successful accomplishment of learning outcomes. In such cases the student is advised to withdraw from the course.

Incomplete Grade Policy An **I** grade indicates incomplete coursework and may be awarded to graduate and undergraduate students. (Undergraduate rules apply to non-degree-seeking students.) It may be awarded to an undergraduate student only when a small portion of the student's work is incomplete and only when the student is otherwise earning a passing grade (C or better). See the current catalog `http://www.ugs.usf.edu/catalogs.php` for further information

S-U Grade Policy Students who want to take this course for a grade of S-U must sign the S-U contract no later than the end of the Third week of classes. There will be no exceptions. Courses to satisfy Gordon Rule may not be taken on an S/U basis. Required courses in the major may not be taken on an S/U basis. Courses to satisfy Foundations of Knowledge and Learning (FKL) General Education may not be taken on an S/U basis.

Tutoring Center For extra help in this class, please be sure to visit the Math Center in the SMART Lab `http://usf.edu/smartlab/` in the Library (LIB232). The Center is open six days a week (excluding Saturdays). Call 974-9944, or stop by the second floor of the Library for more information.

Attendance Policy Attendance during the whole class time is required. You are responsible for

any announcement given either in class, on Canvas, or on WebAssign.

Cellphones, Laptops and Calculators Please turn your cell phone and laptop off before you come into class and store them out of sight. If there is some special circumstance for which you may need to be contacted in the middle of the class, please seek permission from the instructor before class. If your cell phone is not turned off and stored out of sight during class, you may be asked to leave the class, and any work that was handed in that day will count as a 0. No cellular phones are permitted during examinations. Calculators may or may not be allowed during exams (but not quizzes), and if calculators are allowed, this allowance is restricted to scientific, non-graphing calculators.

Retaining Exams You should keep all your returned exams, quizzes, and peer led assignments until you receive your final grade. You will need these exams and assignments to demonstrate that a grade was incorrectly recorded, should that happen. Any unclaimed exams or other written work will be kept until the next exam is given, after which they will be discarded.

Academic Integrity and Disruption of Academic Process Academic integrity is the foundation of the University of South Florida System's commitment to the academic honesty and personal integrity of its university community. Academic integrity is grounded in certain fundamental values, which include honesty, respect, and fairness. Broadly defined, academic honesty is the completion of all academic endeavors and claims of scholarly knowledge as representative of one's own efforts. The final decision on an academic integrity violation and related academic sanction at any USF System institution shall affect and be applied to the academic status of the student throughout the USF System, unless otherwise determined by the independently accredited institution. I expect the highest standard of academic integrity from my students. Any cheating will result in a failing grade for the assignment or test in question, and possibly for the course. Cheating may result in a grade of F for the course and may jeopardize your attendance at the University of South Florida. For more information, see USF System Regulation 3.027.

Disruption to Academic Process Disruptive students in the academic setting hinder the educational process. Disruption of the academic process is defined as the act, words, or general conduct of a student in a classroom or other academic environment which in the reasonable estimation of the instructor: (a) directs attention away from the academic matters at hand, such as noisy distractions, persistent, disrespectful or abusive interruption of lecture, exam, academic discussion, or general University operations, or (b) presents a danger to the health, safety, or well-being of self or other persons. For more information, see USF System Regulation 3.025.

Student Academic Grievance Procedure The purpose of these procedures is to provide all undergraduate and graduate students taking courses within the University of South Florida System an opportunity for objective review of facts and events pertinent to the cause of the academic grievance. An *academic grievance* is a claim that a specific academic decision or action that affects that student's academic record or status has violated published policies and procedures, or has been applied to the grievant in a manner different from that used for other students. More information may be found at USF System Policy 10-002.

Early Notification Requirement for Observed Religious Holidays Students who anticipate the necessity of being absent from class due to the observation of a major religious observance must

provide notice of the date(s) to the instructor, in writing, **by the second class meeting**. For more information, see USF System Policy 10-045.

Students needing special accommodation Students with disabilities are responsible for registering with Students with Disabilities Services (SDS) in order to receive academic accommodations. SDS encourages students to notify instructors of accommodation needs **at least 5 business days prior to needing the accommodation**. A letter from SDS must accompany this request. The student must bring a current Memorandum of Accommodations from the SDS office; this is a prerequisite for receiving accommodations. Students may request accommodations at any time throughout the semester. However, as accommodations are not retroactive, any grades earned before a student requests accommodations will typically stand. Note: If you need extra time on exams, you must make arrangements to take your exams with the SDS office. You cannot receive extra time if you choose to take your exams with the course instructor. For more information, see USF System Policy 0-108.

Gender-Based Crimes/Sexual Misconduct/Sexual Harassment (Including Sexual Violence) USF has a commitment to the safety and well-being of our students. Please be aware that educators must report incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence that come to their attention. I am required to report such incidents in order for the Office of Student Rights and Responsibilities or the Office of Diversity, Inclusion, and Equal Opportunity can investigate the incident or situation as a possible violation of the USF Sexual Misconduct/Sexual Harassment Policy and provide assistance to the student making the disclosure. If you disclose in class or to me personally, I must report the disclosure and will assist you in accessing available resources. The Center for Victim Advocacy and Violence Prevention, the Counseling Center and Student Health Services are confidential resources where you can talk about such situations and receive assistance without the incident being reported.

Center for Victim Advocacy and Violence Prevention: 813.974.5757
http://www.usf.edu/student-affairs/victim-advocacy
Counseling Center: 813.974.2831
http://www.usf.edu/student-affairs/counseling-center
Student Health Services: 813.974.2331
http://www.usf.edu/student-affairs/student-health-services

Campus Emergencies In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It is the responsibility of the student to monitor the Canvas site for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information.

Important Dates:
Friday, January 11 is the last day to withdraw from this course and receive a tuition refund. Students who have not registered or paid for this course by this date and time must stop attending, unless the instructor has given written permission otherwise.
Saturday, March 23 is the last day to withdraw from this course and receive a grade of "W".