Greensheet for Math 1C – Calculus III — Spring 2021

Class	Math 1C.09Z	**Instructor**	Bert Lo
Lecture	MTWThF 11:30am – 12:20pm Pacific Time (UTC-7) in Zoom		lobert@fhda.edu
Office Hours	MTWTh 1:45pm – 2:35pm Pacific Time (UTC-7) in Zoom		**http://nebula2.deanza.edu/~bert OR google "Bert Lo"**

Course Outline http://www.deanza.edu/publications/catalog/search/outlinepublic.html?searchID=MATH1C

Text

Calculus: Early Transcendentals (8th Edition)
James Stewart
Cengage 2015

Grades

Your grade will be determined by your scores on quizzes, 3 midterms, a final exam, an orientation exercise and a personal development exercise.

Quizzes	105 points (35 points × 3)
Midterms (3)	525 points (175 points × 3)
Final Exam	350 points
Orientation Exercise	10 points
Personal Development Exercise	10 points

A+	at least 970 points	A	930 – 969 points	A–	900 – 929 points
B+	870 – 899 points	B	830 – 869 points	B–	800 – 829 points
C+	770 – 799 points	C	700 – 769 points		
D	600 – 699 points				
F	0 – 599 points				

Calculator

TI-83 / TI-84 (will not be significantly used)

- Most tests will be no-calculator or require restricted models of calculators.
- Bring your calculator to every lecture, quiz and exam (except when instructed otherwise). Always carry a complete set of extra working batteries.
- During lectures and office hours, I can only provide help using the listed calculators. I do not provide any calculator help during quizzes and exams.
- Calculators which do symbolic mathematics (eg. TI-89/92/NSpire) are not allowed on quizzes or exams. You may use a TI-89/92/NSpire for lectures and homework, but you must have access to and know how to use one of the permitted calculators for quizzes and exams. If you only bring a TI-89/92/NSpire to a test, you may need to complete the test with no calculator.
- You may use a TI-82, TI-85 or TI-86 in place of the listed calculators. However, I do not provide help with those.

Attendance

Regular and punctual attendance is important to succeeding in any math class.

- If you are not present during any part of any lecture, you are responsible for getting all lecture notes, homework assignments, handouts and announcements missed. You should arrange to get these from your fellow classmates. (I will not repeat lectures, during office hours or at any other time.)
- At some points during each class, I will ask you to signal your attendance by sending me your 8-digit student ID (along with a code which will be announced) privately in Zoom's chat feature. To insure that your attendance is recorded properly, you must respond within less than 1 minute. **NOTE: Never send your student ID in public chat, nor make it publicly known in any forum.**
- If you are absent on the first day or for more than 25% of either of the first two weeks' classes, I will drop you from the class (per state law), unless you have contacted me & made mutually agreed-upon arrangements beforehand.

- The only other circumstance under which I will drop or withdraw students myself is disruptive classroom behavior (see below). If you do not want to stay beyond the 8th week, you must officially withdraw from the class at Admissions and Records before the end of the 8th week. If you stop attending and do not officially withdraw yourself, you will receive an F for the course.

Readings Reading the textbook every day helps you understand what we discuss in class. It also helps clarify the material by giving examples which you can study at your own pace. Additional handouts provided via my website serve to clarify some of the material in the textbook and lectures. NOTE: These handouts may not be uploaded to Canvas.

- Reading a math textbook properly means understanding all the terminology used in the book, and working out the given examples yourself and checking if you are able to get the same results as in the book.
- You are expected to read the sections of the textbook every day, before the corresponding lecture. You may not understand everything the first time you read it, but it will help you be more comfortable with the language used in class, and make it easier for you to focus during lecture. It will also give you a chance to prepare your questions to ask in class.
- Some concepts are presented differently in the textbook than in lecture, in ways which you may find more in line with your learning style.
- Some explanations are given in more detail in the textbook than in lecture. I will say things in lecture which I might not write – you will find most of those "missing" notes in the textbook.
- I believe that reading the textbook daily accounts for about 20% of your learning in a math class. If you do not read the textbook each day, you should not expect to score higher than a C, and you may likely score worse.

Homework Doing homework on a daily basis helps you to really understand the material, and makes lectures easier to follow. It allows you to discover and correct your confusions and misunderstandings, so you'll be less likely to make the same mistakes during quizzes and exams. Homework also develops critical thinking, since **you will be asked to consider problems which are not explicitly discussed in lecture**.

- Homework will be assigned each day but will not be collected or graded. It is your responsibility as college students to check that your answers and solutions are correct, and to correct any mistakes or misunderstandings. During the quarter, you will be asked to send in your homework, and have one-on-one meetings with the instructor to discuss your situation. Participation in these meetings will count towards your scores.
- You should work in groups of 2 to 4 people on homework. Everyone should do all the homework separately, then discuss the questions you could not do or had difficulty with. Do not copy from one another. Do not simply split the assignment, then do a fraction of the total work and exchange solutions. (This splitting method usually results in everyone in the group failing from lack of practice.)
- Homework will be assigned for each lecture section. You should do as much of it as possible that day, ask questions about it the next day in office hours, and have it completed by the second day after the lecture. The longer you wait after lecture before you do the corresponding homework, the less you will remember the lecture, and the more you will need to relearn the lecture before you can do the homework.
- You should expect to spend at least 10 hours a week outside of class on homework, or an average of at least 2 hours per day. Each day, you should be finishing yesterday's homework, doing as much of today's homework as possible, and reading ahead for tomorrow's lecture.
- Don't let the homework pile up. Because we operate on the quarter system, we will cover the material fairly quickly. If you fall behind in homework by even just a few days, the lectures will get harder to understand, and the homework will take more and more time the further behind you get. So, a 2 hour homework set might take 6 hours to complete if you are behind by a week, and that still doesn't include all the other old homework you have to finish up.
- Give each question a solid effort before you start looking at the solution manual or asking someone for help. You will learn much more from trying to solve a problem yourself, than from watching someone else solve it for you. (I can watch other people play basketball all day long, but I will only really improve when I pick up a ball and start shooting baskets myself.) Reread the notes or textbook, or search for similar examples for ideas on how to proceed, then try again. **IF YOU ONLY FOLLOW THE SOLUTIONS IN THE SOLUTION MANUAL, BUT YOU DO NOT LEARN TO SOLVE THE PROBLEMS WITHOUT HELP, YOU WILL PROBABLY FIND THAT YOU HAVE GREAT DIFFICULY WITH THE PROBLEMS THAT APPEAR ON TESTS.**
- Homework assignments will only represent part of what you are expected to master. If you only do the assigned problems, you might or might not be able to achieve a C in the class. If you want a higher grade, you should do extra problems on your own, in order to get enough practice to truly master the material. Once you know how to do a certain type of problem, do another similar one to make sure you can do it without an example to follow. Then do another one. The more practice problems you do, the more confident you will feel, and the better you will do on the tests.
- I believe that homework accounts for about 50% of your learning in a math class. You should not expect to pass the class if you do not keep up with the homework. If you don't think you can commit at least 10 hours a week to this class, take it another quarter when you can make that time commitment.

Quizzes Quizzes are designed to motivate you to keep up to date on the homework.

- Quizzes will be given periodically throughout the quarter. Each quiz will correspond to several related sections from the textbook. The exact day will be announced 3 days in advance. There are no make-ups for missed quizzes.
- There will be at least 140 total points available across all quizzes combined. So, you can miss or do very badly on one quiz without impact to your grade.
- Quizzes will cover sections up to and including 2 days before the quiz. If you do the homework the day of the lecture, and ask questions the next day, you should be ready for the quizzes.
- Most quizzes will be non-calculator.
- Each test (quiz, midterm, final exam) must be submitted via Canvas as a single PDF.
- All tests end at the time stated. If your test is received after that time, you will receive a 0 for it. Start uploading your PDF into Canvas at least 1 hour before the deadline.
- Credit on tests will be heavily weighted to properly written solutions, not just correct final answers. Follow the guidelines shown in lecture and website handouts.
- Some quizzes will be graded by you. (The details will be discussed during the quarter.) This will help you get a better understanding of your errors, how to improve, and how to present mathematical work correctly. I reserve the right to give you a 0 on a quiz, if it appears that you are being overly generous in grading yourself. If you alter the work on your quiz during grading, that is considered cheating (see Academic Honesty).

Midterms There will be three midterms during the quarter.

- Midterm dates will be announced at least 3 days before the corresponding midterm is given.
- No midterm scores will be dropped. There will be no make-up midterms.
- The expectations for midterms and quizzes are very different. Because quizzes are given 2 days after material is taught, you will earn significant credit even if you make small errors, because you are just starting to incorporate the subject matter. For midterms, I assume that you have had much more practice with the material, so that you are able to identify and execute solutions clearly, completely and correctly.
- To be fully prepared for the midterms (and final exam), consider creating individual strips of paper, each with a different problem, definition or theorem, throw them all in a hat, then draw them out in random order and solve each. This will give you practice in identifying solution techniques without benefit of knowing which section the solution might be found in. Also consider creating and solving your own problems within your homework group.
- If you score higher on your first midterm than on your second or third midterm, I will replace your lowest midterm score with the average of that score with your score on the first midterm. Only one of your second or third midterm scores can be replaced in this way. The first midterm score cannot be replaced. So, it is to your benefit to begin studying regularly right away.

Final Exam There will be a comprehensive final exam during the 12^{th} week of the quarter.

- The final exam will last 2 hours.
- No arrangements will be made to reschedule the final exam.

Personal Development Keeping a journal encourages you to take responsibility for your own progress and success.

- You will be given a score calculator to help you track your scores. Completing the score calculator is optional. However, if you ever wish to discuss your grade with me, you will be required to bring your completed up-to-date score calculator with you.

Enrolment You are responsible for handling all issues related to your enrolment.

- If you wish to drop/withdraw from the class, do so at Admissions and Records before the end of the $2^{nd}/8^{th}$ week.
- If you do not pay for your classes on time, you will be dropped from the class. If you then wish to re-enroll, you will be moved to the end of the waiting list.
- I will check the class list frequently. If you are not enrolled, I will not grade your work, and I will give your seat away.

Classroom Behavior Respectful participation in the classroom learning process is strongly encouraged.

- Feel free to ask questions to the instructor. Discussions are to be focused on the class material, concepts, homework and policies.
- In order to encourage participation, you may earn up to 20 bonus points based on your level of participation in office hours, which will be added directly to your score for the quarter.

- Disruptive, distracting or disrespectful behavior in the lecture or office hours is unacceptable. (This includes any form of Zoom bombing ie. inappropriate sharing of language, sounds, images, videos etc. with the instructor or any members of the class during a Zoom lecture or office hours.) You will be removed from the Zoom session, and you will be unable to rejoin that session. If I have to remove you twice during the quarter, I will act to have you suspended/withdrawn from my class.

Academic Honesty

Cheating is the act of trying to get credit for work that is not yours. I have a **zero tolerance** policy towards cheating.

- Cheating includes (but is not limited to): communicating with anyone else during any type of test; copying or submitting work from someone else or from any source (eg. book, website); altering or interfering with grading or attendance taking; using any electronic equipment during quizzes and exams that has not been authorized (eg. cell phones, tablets, computers, symbolic calculators); helping another student cheat. (This is not an exhaustive list.)
- My zero tolerance policy towards cheating is: if you are caught cheating, I will give you an F for the course (no second chances).
- In addition, if you are caught cheating, you will be reported to the division dean and Student Development, who may impose much stricter consequences (eg. probation, suspension, expulsion). NOTE: Each quarter since Spring 2020, I have reported more students for collusion and submitting work that was clearly not their own than I had for the years 2017-2019 combined.

Help

DeAnza College wants you to succeed, and we will help you as much as possible.

- Get help as soon as possible. Don't wait until you are 2 or 3 weeks behind class before asking for assistance.
- I will do all I can to help you, if you ask for help first. You must take responsibility for seeking assistance – it will not come looking for you.
- Some students begin using the help services during the 1st week. To start, learn where the services are located, when they are available, and if you have to follow any special procedures to use them.
- If you use any type of tutor, show them the lecture materials and handouts, so they are aware of expectations and what you have been taught. A good tutor should be able to follow along, and not impose their own standards (which may not be applicable).

There are three primary sources of help if you are having difficulty with the material in this class.

- Homework group: Contact the other members of your homework group electronically or by phone, or arrange to meet up online for more in-depth discussions.
- Office hours: I have office hours Mondays to Thursdays (except holidays), no appointments necessary. If my office hours are not convenient, I can occasionally schedule other times to meet. Just ask.
- Math Tutorial Center: Free tutoring is available. Visit https://www.deanza.edu/studentsuccess for more details.
- Additionally, if you have or think you might have a disability, the Disability Support Services (DSS) and Educational Diagnostic Center (EDC) offer additional services. In addition to helping students with dyslexia, attention deficit disorder and other commonly recognized learning disabilities, these services are also designed to help students whose abilities and efforts significantly exceed their actual achievement. If you feel this describes your situation, please talk to me, so I can put you in touch with the appropriate people.

Other Notes

Some specific advice on succeeding in Math 1C.

- In each quarter of calculus, there is a at least one type of problem for which you will learn multiple methods to solve. You will need to develop an intuition on how to quickly identify which method will work and is easiest, and how to identify if you have chosen the wrong method.

  In Math 1A, that type of problem was finding limits (should you use L'Hopital's Rule, one sided limits, "dividing out infinity" or simple calculation ?).

  In Math 1B, that type of problem was evaluating antiderivatives and integrals with upper & lower limits (should you use algebraic simplification, u-substitution, integration by parts, trigonometric substitution, partial fractions, improper integrals, function symmetry or geometry ?).

  In Math 1C, there are two such types of problem: determining if a series converges, and finding an "infinite polynomial" approximation of a non-polynomial function. Together, the two topics will take almost half the quarter. To develop the necessary intuition to succeed, you will need to stay on top of the material at all times, exchange ideas with other people (your classmates and me) about how to decide which problem solving method to use, and ask questions frequently.

Some general advice on succeeding in my classes.

- E-mail to the instructor must be sent to lobert@fhda.edu (not via Canvas) with a subject line in the format

  [Math 1C] (*studentID* *lastname*, *firstname*) TOPIC

  with a space between "Math" and "1C", between "]" and "(", between your student ID and your last name, between "," and your first name, and between ")" and the topic of your e-mail.

  For example, if your name is Jenny Tutone and your student ID is 08675309, and you wish to discuss prerequisites, use the subject line

  [Math 1C] (08675309 Tutone, Jenny) Prerequisites

  Not following this format will result in your e-mail being misfiled by the e-mail filters and possibly not seen.
- Check my website daily. Any updates are usually made before 7pm. You are responsible for all announcements and handouts on my website regardless of whether they are also announced in class.
- I talk a lot (to explain almost everything I present), and I write a lot (for non-auditory learners). Taking notes is useful, but if you spend the entire class only taking notes, it is no different than copying from the textbook, and you may miss out on the spoken clarifications of what is being explained.
- Zoom recordings may be useful in filling in gaps in what you learned from lecture, but are not as helpful as asking questions when the material is originally discussed in lecture.
- In lecture, I will occasionally demonstrate ways of organizing and checkpointing your work so that you reach a correct solution more easily, you are less likely to make common mistakes, and you are able to catch your mistakes sooner. These techniques may be required on tests, and may not be found elsewhere in the textbook nor online.
- When taking tests of any type, first glance quickly at all questions and their point values, so you have a sense of what is expected.
- Grading gets progressively stricter from the quizzes to the midterms to the final exam. On the quizzes, you may earn a considerable amount of partial credit if you only make one algebra mistake. On the midterms, you will earn less partial credit for the same type of mistake. On the final exam, you may earn no partial credit for the same type of mistake.
- I do not curve any tests, even if the class median is an F. I have found that when I curve, students actually do worse later on. When I don't curve, the students who are serious about getting A's and B's make adjustments to their study habits and earn those grades outright anyway.
- If you do not start studying regularly during the first week, you should drop the class today and give someone from the waiting list an opportunity to succeed. If you fail the 1st midterm, that score will **NOT** be replaced (see **Midterms** section above), and could result in an overall drop of an entire grade for the quarter.

- Things which really annoy me to no end, and which I will address in no uncertain terms:
  - students who cheat – they have no regard for their fellow students' efforts, nor for the time I waste dealing with the disciplinary actions (FAIR WARNING: in order to save time dealing with these issues, I collect evidence throughout the quarter, but may only confront students at the end)
  - students who don't read the greensheet, and then ask me something which is clearly spelled out there
  - students who don't submit their tests by the deadline, and then whine when I give them a 0 even though it is clearly spelled out in the greensheet
  - students who don't study during the first third of the quarter, fail the 1st midterm, and then complain that the midterm is too hard, even when it looks pretty much like their lecture & homework

Despite the length and language of my greensheet, I'm actually very supportive of students who are serious about learning and working hard to be prepared for whatever higher math may come their way. If that doesn't describe you, you might find me overbearing and obnoxious.

Student Learning Outcome(s):

*Graphically, analytically, numerically and verbally analyze infinite sequences and series from the perspective of convergence, using correct notation and mathematical precision.
*Apply infinite sequences and series in approximating functions.
*Synthesize and apply vectors, polar coordinate system and parametric representations in solving problems in analytic geometry, including motion in space.