



Math 226 Syllabus
Calculus III
Lecture 39559R (Leslie)

COURSE INFORMATION AT-A-GLANCE

Math 226: Calculus III (4.0 Units), Fall 2022

Official Course Description

Vectors, vector valued functions; differential and integral calculus of functions of several variables; Green's theorem, Divergence theorem, Stoke's theorem.

Prerequisite(s): 1 from (MATH 126 or MATH 127 or MATH 129)

Textbook: (Required) Stewart. *Essential Calculus*, 2nd edition. ISBN 9781133112297

(Recommended) Stewart. *Student Solutions Manual for Stewart's Essential Calculus, 2nd edition*. ISBN 9781285948188

Note: The student solutions manual contains the solutions of the textbook problems for odd-numbered problems only. Problems assigned for required homework will mostly be drawn from the even-numbered textbook problems or written by the instructor. However, the odd-numbered problems are good study material for the quizzes and exams, and the student solutions manual is very useful for checking your work when studying.

Meeting Times, Locations, Instructor

Lecture

10:00am–10:50am MWF (Section 39559R), Social Sciences Building (SOS) room B44.

Instructor: Trevor Leslie, lesliet@usc.edu. Assistant Professor (RTPC) of Mathematics.

Office Hours: 11am–12pm on Mondays, 1pm–2pm on Thursdays, and by appointment.

Discussion Sections

10:00–10:50am TR (Section 39560R), Kaprielian Hall (KAP) room 113.

11:00–11:50am TR (Section 39561R), Kaprielian Hall (KAP) room 113.

Instructor (both sessions): TBA

Office Hours: TBA.

Exams and Other Important Dates

- Monday, September 5: Labor Day—no class
- Friday, September 30: **Midterm Exam #1** (during class)
- October 13–14 (Thursday–Friday): Fall Break—no class
- Friday, November 4: **Midterm Exam #2** (during class)
- Friday, November 11: Veterans Day—no class
- Friday, November 11: Last day to withdraw with a grade of 'W'
- Friday, December 2: Last day of class
- Wednesday, December 7, **Final Exam** (2pm–4pm). This is an 'exceptional time,' according to the Registrar.

The dates and modality of exams is subject to change, according to pandemic-related disruptions and other unforeseen extreme circumstances; barring such circumstances, however, these dates and times should be considered finalized.

I am aware of the following dates associated to religious observances that fall on days of class meetings. I will make efforts to avoid scheduling homework deadlines and quizzes on these dates. If you feel a date is missing from this list, please bring it to my attention as soon as possible.

- Rosh Hashana: September 26th and 27th
- Yom Kippur: October 5th
- Sukkot: October 10th and 11th
- Shemini Atzeret / Simchat Torah: October 17th and 18th

COURSE FORMAT AND INSTRUCTIONAL MODE

This course will run in-person. The instructional mode is subject to change according to university directives and instructor health.

Reasonable efforts will be made to live-stream lectures via Zoom, with recordings available on Blackboard; however, the following disclaimers are in place:

- Technical difficulties may occasionally prevent the live-stream or recording from being available.
- The quality of available live-streams and recordings of class meetings is not guaranteed to be high.
- The instructor will not use class time to attempt to resolve technical difficulties (for example, if the recording stops working mid-lecture).

With the above in mind, students should plan to attend class in person if their health allows it. See below for more details.

Attendance

In-person attendance is strongly recommended, *provided* that you are not sick, that you have no symptoms of any illness, and that you do not have a medical reason to be absent. Attendance on any given day is *not required*, unless of course there is a scheduled quiz or exam. However, if your attendance over the course of the semester is so sparse that I don't know who you are by the end of the semester, I reserve the right to impose a small grade penalty (A to A-, B- to C+, etc.).

Lecture Notes

I will provide the class with the lecture notes that I prepare before teaching. What I write down on the board will be very similar to the content of these notes. Whether you are attending in person or remotely (but especially remotely), it is recommended that you keep these notes in front of you, to clarify what I've written if you cannot read the board. Lecture notes will be available on Blackboard: Click on 'Content' in the left pane, then navigate to the 'Course Notes' folder.

Online Participation

USC has installed audio-visual equipment in the lecture room, which I will use to attempt to accommodate students who are not in attendance on a given lecture day. Please be aware that the technology is subject to problems, including, but not limited to the following:

- The camera's resolution is such that it takes some effort to read the board, regardless of how far it is zoomed in or out.
- The camera occasionally freezes and stops recording.

I cannot be responsible for the malfunctioning of the equipment. I am providing my lecture notes as a fall-back option for students in case of a malfunction. However, there is a real possibility that some lecture content may not be available online.

Other Online Components

- Blackboard. Lecture notes and Zoom meeting links will be available through Blackboard. Blackboard access is available through `my.usc.edu`.
- Gradescope. You will submit homework assignments through Gradescope. You should have already received an email notification when I added you to the Gradescope roster for this course.
- Campuswire. We will use Campuswire as a discussion board for questions on homework, as well as course logistics. You will be sent an email invitation to join the Campuswire roster.

COURSE CONTENT

This course is the natural continuation of Math 126. It covers the following topics: Vectors and Geometry in \mathbb{R}^3 , Partial Derivatives and Applications, Multiple Integration, Vector Calculus (Line Integrals, Green's Theorem, Stokes' Theorem, and the Divergence Theorem).

We will cover roughly the following sections in the course textbook (not necessarily in this order): 10.1–10.8, 11.1–11.8, 12.1–12.8, 13.1–13.9. Within some sections of the textbook, certain topics will be skipped.

ASSIGNMENTS AND ASSESSMENTS

Graded work will consist of exams, quizzes, and written homework. Details below are subject to change.

Exams (73% of total grade): Two midterm exams will be administered in class. The final exam will be administered per the university's final exam schedule. See page 1 of this syllabus for the dates.

Breakdown of exam contribution toward final grade:

- Your best midterm score will count for 23% of your final grade
- Your second-best midterm score will count for 19% of your final grade.
- The final exam will count for 31% of your final grade.

The final examination will be comprehensive, covering all topics presented in the course. Extra emphasis will be placed on the material covered after the second midterm. Make-up exams will be allowed only under exceptional circumstances (including illness) and will be dealt with on a case-by-case basis.

Quizzes (15% of total grade): These will be administered weekly during discussion sections, usually (but not always) on Thursdays. Your lowest score will be dropped automatically.

Written Homework (12% of total grade): Roughly two assignments per week will be assigned and submitted via Gradescope. Your lowest two written homework grades will be dropped automatically. Due dates will usually be on Tuesdays and Fridays at 6pm PST.

Though homework counts for a relatively small percentage of your grade, they are in some sense the most important part of the course. A good deal of your actual internalization of the course concepts will happen while completing homework assignments.

The following policies apply to homework assignments.

Homework Submission and Late Work Protocols and Policies

- All homework assignments should be submitted through Gradescope by the deadline.
- Submit a single .pdf document. If you are handwriting your work on paper (as opposed to on a tablet), there are a number of cell phone apps you can use to take pictures of your work and convert to a single .pdf. Alternatively, you can use a conventional scanner. Please see me if this submission protocol creates a hardship for you (e.g., you don't have a smart-phone or easy access to a scanner).
- Submit the problems in the assigned order, and make sure your pages are in the correct order. Use Gradescope's page-matching procedure to indicate which problems you've written on which pages. Points will be deducted for out-of-order pages.

- Write your work neatly. Points will be deducted for sloppy work. Show your work, but don't include mistakes you made and corrected. Unless you did the problem absolutely correctly on your first attempt, you should probably plan to write a 'clean' version of your solution *after* you initially solve the problem. You are recommended to write each problem on a separate page, to make this process easier.
- Late homework will be accepted with a 15% penalty until 8am on the morning following the deadline. The penalty will be automatically assessed for all assignments submitted after the deadline (even by just a minute). Gradescope will not accept submissions after 8am.
- Reasonable requests for extensions will be considered, if the request is presented by email to the instructor by 12pm on the date of the assignment deadline. In most cases, I will be willing to waive the 15% penalty and allow a late submission to be turned in by 8am the following morning. Requests for extensions beyond that time will be considered but not usually granted, except in extreme circumstances.
- In most cases, the solutions to the assignment will be posted the day following the assignment deadline, or shortly thereafter. Absolutely no submissions will be accepted after the solutions have been posted.

Collaboration and Use of Outside Resources

- You are encouraged to work together with your classmates to solve the homework problems. Your write-up must, however, be your own. If you worked together with someone, please indicate this at the top of your submission. (E.g., "I worked with Terence Tao on Problems 1.2 and 2.3.")
- You are encouraged to post questions (and answers to questions by your peers!) about the homework assignments on CampusWire. (You'll receive an email invitation to join.) Do not request or provide full solutions, however. You have the option to post anonymously on CampusWire. (I will still see who posts what, but your classmates will not.)
- The use of Chegg and similar homework help sites is expressly forbidden. Making posts about homework problems on such sites will be treated as an academic integrity issue.
- One exception to the above rule: You are allowed to make posts on MathStackExchange in connection with this course material, provided that you do not post complete prompts of homework problems. This, however is not encouraged. (MathStackExchange is great for a lot of things, but in this course, I'd rather have you interacting with your peers, either through CampusWire or some other medium.)

Grade Cutoffs

Assuming the average class grade (calculated in terms of GPA) is a B– or better, the end-of-semester grades will be determined using the following table, which is based on USC guidelines.

	B+	88.00–89.99	C+	78.00–79.99	D+	68.00–69.99			
A	≥ 93.00	B	83.00–87.99	C	73.00–77.99	D	63.00–67.99	F	<60.00
A–	90.00–92.99	B–	80.00–82.99	C–	70.00–72.99	D–	60.00–62.99		

If the class GPA is lower than a B–, the grading scheme will be adjusted accordingly.

Grading Disputes

If you feel an assignment or assessment has been mis-graded, bring it to the attention of your TA and myself within two days of when it is returned to you. The appropriate person will re-grade the entire assignment or assessment—not just the problem in question. Therefore the overall score may go up or down. Grading grievances aired more than two days after they are returned may not be re-graded.

MISSED QUIZ POLICY

The following policies will be applied for missed quizzes.

- A student may miss up to 2 quizzes without any penalty whatsoever. This is intended to be reserved for health-related reasons, but since such a policy would be impossible to enforce, no reason is required. The student is, however, required to report the missed quiz to the instructor, to facilitate easier record-keeping.
- *Of all the quizzes a student takes*, one score will be dropped. A student who misses fewer than 2 quizzes still may only drop *one* quiz. That is to say, *missed quizzes* are totally separate from the *dropped quiz*.

Summary (assuming 10 quizzes total):

- 0 missed quizzes \implies 1 additional dropped quiz, 9 quizzes counted (out of 10 total).
- 1 missed quizzes \implies 1 additional dropped quiz, 8 quizzes counted (out of 10 total).
- 2 missed quizzes \implies 1 additional dropped quiz, 7 quizzes counted (out of 10 total).
- If a student misses more than 2 quizzes, they will be required to take a make-up quiz (or receive a zero). **The make-up quiz will be somewhat more difficult than the original version.** The rationale for this is that it will discourage students from missing quizzes unnecessarily. On the other hand, it is intended to still be fair for students who need to miss more than 2 quizzes for legitimate reasons. Students who take the make-up version will have the benefit of being able to study from the original (easier) version of the quiz (and this will not be considered cheating).
- A student who misses 2 quizzes or fewer, but wishes to take a make-up quiz anyway, will be allowed to do so. However, they may not change their mind about this after taking the quiz. Once a student sits for a quiz, they give up the option of counting it as a “missed quiz.”
- A student may take a make-up quiz up to **two weeks** after the original quiz (but before the final exam). No make-up quizzes will be given after this window except in truly exceptional circumstances.
- A student may attend discussion section and still ‘opt-out’ of taking a quiz. The rationale here is that without this option, a student who is happy with their overall quiz grade with two weeks left in the semester may feel an incentive to skip discussion sections in order to avoid incurring undesirable scores. The option to ‘opt-out’ is provided to remove that incentive and encourage participation in discussion even at the end of the semester.
- The instructor reserves the right to revise this policy if the number of make-up quizzes becomes unmanageable.

MISSED EXAM POLICY

- Similarly to the missed quiz policy, a student who misses a midterm exam has the following two options:
 - (1) Increase the weight of the final exam to 50% of the total grade (31% for the final exam, as originally planned, plus 19% for the missed exam) OR
 - (2) Take a slightly harder make-up exam.
- If a student misses both midterm exams, they must take a make-up exam for one of them.
- Every student must take the final exam. Health-related reasons for missing the final will be dealt with on a case-by-case basis.

ADDITIONAL COURSE POLICIES

- DSP approved students should inform the instructor at the beginning of the semester for any requested accommodation.
 - Work-related travel must be scheduled outside of the mid-term and final examinations periods. Accommodation to take exams on different dates will be made only for family emergencies, religious observance and documented illness or health-related emergencies.
 - Final grades will depend entirely on course performance as outlined above. Financial support requirements (e.g., minimum grade requirement for tuition reimbursement) cannot and will not be taken into consideration.
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STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

The information below applies university-wide and is available at

<https://dornsife.usc.edu/ase/statement-on-academic-conduct-and-support-systems/>

Academic Conduct

Plagiarism—presenting someone else’s ideas as your own, either verbatim or recast in your own words—is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <https://policy.usc.edu/scientific-misconduct>.

Support Systems

Counseling and Mental Health: (213) 740-9355, 24/7 on call.

<https://studenthealth.usc.edu/counseling>.

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline: 1(800) 273-8255, 24/7 on call.

<https://suicidepreventionlifeline.org>.

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP): (213) 740-9355(WELL) (press “0” after hours), 24/7 on call.

<https://studenthealth.usc.edu/sexual-assault>.

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED): (213) 740-5086 / Title IX: (213) 821-8298.

<https://equity.usc.edu>, <https://titleix.usc.edu>.

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment: (213) 740-5086 or (213) 821-8298.

usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity /Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs: (213) 740-0776.

<https://dsp.usc.edu>

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention: (213) 821-4710.

<https://campussupport.usc.edu>

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC: (213) 740-2101.

<https://diversity.usc.edu>

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency. UPC: (213) 740-4321, HSC: (323) 442-1000. 24/7 on call

<https://dps.usc.edu>, <https://emergency.usc.edu>

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety. UPC: (213) 740-6000, HSC: (323) 442-120. 24/7 on call

<https://dps.usc.edu>

Non-emergency assistance or information.

Office of the Ombuds. (213) 821-9556 (UPC) / (323) 442-0382 (HSC)

<https://ombuds.usc.edu>

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.