SYLLABUS
Math 126: Calculus II
Section 39504
Fall 2023

Lectures: MWF 10:00 – 10:50am, THH 116
Instructor: Spencer Gerhardt
Course Webpage: https://blackboard.usc.edu/webapps/login/
Email: sgerhard@usc.edu
Office Location: KAP 406J
Office Hours: MW 2 – 3pm, F 1 – 2 pm, or by appointment

Course Description: (4 units) Trigonometric functions; applications of integration; techniques of integration; indeterminate forms; infinite series; Taylor series.

Prerequisites: Math 125.

Text: **Essential Calculus** (2nd Ed.) by James Stewart. ISBN-13: 978-1-133-11229-7.

Discussions: TTh, see your class schedule for the specific room and time.

Teaching Assistant: Jiaking Wang
Email: jiakangw@usc.edu
Office Location: Math Center, KAP 263
Office Hours: Math Center Schedule

Math Center: The Math Center is open from 8am to 7pm Monday-Thursday, and 8am to 5pm on Friday. It is primarily run by math graduate students here at USC. The office hours of your TA will also be held in the Math Center, although you can go to the Math Center at any time it is open to ask for help.

COURSE LOGISTICS

Throughout the semester our course will make use of the following online systems:

- Blackboard as the main hub for all communication, links, and course materials.

- Gradescope for homework, quizzes and exams.

Over the the semester, it is possible some students will enter USC health and safety protocols. To best accommodate this eventuality, I will post the lecture notes on Blackboard. Hence you don't need to rush to write everything down in class (unless you like to).

It is also possible due to health and safety protocols (or some other reason) that an individual class lecture may be held remotely via Zoom. If this is the case, I will notify you in advance via Blackboard.

ASSIGNMENTS

Homework:

Each lecture a small number of homework problems will be assigned. These problems will be due immediately before the following lecture, and will be submitted through Gradescope. In case you need to miss a lecture, these problems can be viewed through the posted lecture notes on Blackboard.

Since it's good practice to attempt working problems while learning new material, some class time will typically be devoted to homework problems. You are welcome (and encouraged) to work with other students in class on the homework, but you should submit your own work. You may also ask questions about the homework in office hours or discussion section.

Any exercises submitted after the due date will receive half-credit, regardless of circumstances. Some homework assignments will be dropped at the end of the semester.

Quizzes: There will be weekly quizzes due at the end of each Thursday discussion section (except exam weeks), and submitted via Gradescope. The quizzes will be a mixture of take-home and in-person. You may work with other students on the take-home quizzes, but you should submit your own work. There are no make-up quizzes, but the lowest quiz scores is dropped.

EXAMS AND GRADING

Exams: All exams will be held in person during the scheduled times. If you cannot be present, you must contact me **BEFORE** the exam date to make other arrangements. If you no-show for an exam and attempt to contact me afterward, do not expect to be allowed a make-up exam.

There are three exams in this course: two midterms and a final. The midterms will be held during normally scheduled class times. The final exam is cumulative and written by the Math Department. It is university policy that no student may take the final exam early, or be allowed to skip it.

- **Exam 1**: Friday October 6

- **Exam 2**: Friday November 3

- **Final Exam**: **Wednesday, December 6 2023, 2 – 4 pm**.

Grading and Curves: Department guidelines for this course state that approximately half the letter grades should be A's and B's. So the overall class median grade will be roughly the division between B's and C's.

Your grade in the course is calculated as follows:

- Homework: 10%

- Quizzes: 10%

- Midterms: 45%

- Final Exam: 35%

How to calculate your current grade:

The grading scale for the course will be:

[92-100]= A
[90-92)= A-
[88-90)= B+
[82-88)= B
[80-82)= B-
[78-80)= C+
[72-78)= C
[70-72)= C-

Using this scale and the weighting of the components given above, you can calculate your current grade at any time in the course. Midterm scores will be curved, but there is no curve on HW or quizzes.

For instance, if you want to know your grade before the final exam and you have a 95% on your homework, 92% on your quizzes, your curved Midterm 1 score is 89%, and your curved Midterm 2 score is 81%, then your score before the final is:

$$((93(.10) + 92(.10) + 89(.225) + 81(.225))/.65 = 87.3, \text{which is a B.}$$

OTHER POLICIES

Disability Services: Any student requesting accommodations based on a disability is required to register with the Office of Student Accessibility Services (OSAS) each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to me as early in the semester as possible.

https://osas.usc.edu/
213-740-0776 (phone)
213-740-6948 (TDD only)
213-740-8216 (fax)
OSASFrontDesk@usc.edu

Academic Dishonesty: All students are expected to maintain university standards on academic integrity. Please refer to the Student Handbook on the Office of Academic Integrity website for a description of these standards. The following are the university recommended sanctions for academic integrity violations.

Appendix A: Academic Dishonesty Sanction Guidelines

Faculty may consult with members of the Office of Student Judicial Affairs and Community Standards at any point in the process, (213) 821-7373.

Note: The Student Conduct Code provides that graduate students who are found responsible for academic integrity violations may be sanctioned more severely than Appendix A suggests.

Violation	Recommended Sanction for Undergraduates*
Copying answers from other students on any course work.**	F for course.
One person allowing another to cheat from his/her exam or assignment.	F for course for both persons.
Possessing or using material during exam (crib sheets, notes, books, etc.) which is not expressly permitted by the instructor.	F for course.
Continuing to write after exam has ended.	F for course.
Taking exam from room and later claiming that the instructor lost it.	F for course and recommendation for further disciplinary action (possible suspension).
Changing answers after exam has been returned.	F for course and recommendation for further disciplinary action (possible suspension).
Fraudulent possession of exam prior to administration.	F for course and recommendation for suspension.
Obtaining a copy of an exam or answer key prior to administration.	Suspension or expulsion from the university; F for course.
Having someone else complete course work for oneself.	Suspension or expulsion from the university for both students; F for course.
Plagiarism — Submitting other's work as one's own or giving an improper citation.	F for course.
Submission of purchased term papers or papers done by others.	F for course and recommendation for further disciplinary action (possible suspension).
Submission of the same assignment to more than one instructor, where no previous approval has been given.	F for both courses.
Unauthorized collaboration on an assignment.	F for the course for both students.
Falsification of information in admission applications (including supporting documentation).	Revocation of university admission without opportunity to reapply.
Documentary falsification (e.g., petitions and supporting materials; medical documentation.)	Suspension or expulsion from the university; F for course when related to a specific course.
Plagiarism in a graduate thesis or dissertation.	Expulsion from the university when discovered prior to graduation; revocation of degree when discovered subsequent to graduation.***

*Assuming first offense
**Exam, quiz, tests, assignments or other course work.
***Applies to graduate students

COURSE CALENDAR

We will cover the following sections of your textbook, on roughly the weeks listed below. This calendar is very tentative.

Week 01: Introduction, Inverse Trig Functions and Hyperbolic Functions, Sections 5.6 – 5.7.

Week 02: L'Hospital's Rule, Integration by Parts, Sections 5.8, 6.1.

Week 03: Trig Integrals and Substitutions, Partial Fractions, Sections 6.2 – 6.3. **Monday Labor Day**. Sept 8 is the last day to add classes, or to drop without a "W".

Week 04: Approximate Integration, Improper Integrals, Sections 6.5, 6.6.

Week 05: Area Between Curves, Volumes, Sections 7.1 – 7.2.

Week 06: Volumes between Cylindrical Shells, Review, Section 7.3.

Week 07: Arclength, Area of a Surface of Revolution, Sections 7.4 – 7.5. **Exam 1 on Friday 10/6.**

Week 08: Applications to Engineering, Sequences, Sections 7.6, 8.1. **Thursday and Friday Fall Recess.**

Week 09: Series, The Integral and Comparison Tests, Sections 8.2 – 8.3.

Week 10: Other Convergence Tests, Power Series, Sections 8.4 – 8.5.

Week 11: Representing Functions as Power Series, Review, Section 8.6. **Exam 2 on Friday 11/3.**

Week 12: Taylor and Maclaurin Series, Applications of Taylor Polynomials, Sections 8.7 – 8.8. **Friday Veterans Day**. Nov 10 is the last day to drop with a "W".

Week 13: Parametric Curves, Polar Coordinates, Sections 9.1, 9.3.

Week 14: Polar Coordinates, Section 9.4. **Wednesday to Friday Thanksgiving Break**.

Week 15: Review

Finals Week: **Final Exam Wednesday, December 6 2023, 2 – 4 pm**.