

**Math 126: Calculus II**  
**Fall 2019**

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**Instructor:** Dr. Mohamed Ndaoud (Simo)

**Lectures:** MWF 10:00 AM - 10:50 AM in GFS 118

**Office:** KAP 406K

**Office Hours:** MWF 11:00 AM - 12:00 PM in KAP 406K

**Email:** ndaoud@usc.edu

**Teaching Assistant:** TBA

**Discussions:**

39509, Tuesdays and Thursdays, 8:00 AM - 8:50 AM or

39510, Tuesdays and Thursdays, 9:00 AM - 9:50 AM

**Office:** KAP 138

**Office Hours:** TBA

**Email:** TBA

**Grader:** TBA

**Email:** TBA

**Textbook:** *Essential Calculus* - Second Edition, by James Stewart. ISBN: 9781133112297.

**Prerequisite:** Familiarity with the material covered in Math 125 (Calculus I) is assumed.

**Exam Dates:**

Midterm 1 ..... Friday, October 4th, in class.

Midterm 2 ..... Friday, November 8th, in class.

Course Final (2:00 PM - 4:00 PM) ..... Wednesday, December 11th, location TBD,

**You must take the final exam at the scheduled time.**

**No cheat sheet, calculator, cell/smart phone, smart watch, or other electronic device will be allowed during an exam.**

**Extra Help:** Please feel free to ask as many questions about the course as you want and also to make suggestions. In general, the more interaction there is during lectures, the happier I am.

**The Math Center is located in KAP 263 and is open weekdays from 8 am to 7 pm (it closes earlier at 5 pm on Fridays).** The Math Center is attended by faculty and graduate students and it is a good resource for extra homework help.

**Exam Resources:**

[Here](#) is a page containing old calculus exams.

[Here](#) is a page containing old final exams for Math 126 at USC.

**One of the best practices preparing for an exam, is getting familiar with previous exams. Please keep it in mind!**

**Course Content:** inverse trigonometric functions, trigonometric substitutions, partial fraction substitutions, trigonometric polynomials and rational trigonometric fractions, advanced integration methods, improper integrals, indeterminate forms, infinite series, Taylor expansion, cartesian and polar coordinates, planar parametric curves.

**Course Description:** By the end of the semester, you will be familiar with most of the usual techniques and concepts of the theory of a function of a single variable. We will cover the study of antiderivatives, definite integrals, and limiting processes. Calculus II has three main components.

- Techniques for finding antiderivatives (chapter 6).
- Applications of definite integrals (chapter 7).
- Sequences, series and Taylor series (chapter 8).

We will also cover some material from Chapter 5 that is needed for chapter 6 and some material from chapter 9. An underlying theme throughout the course will be that of limits. Limits will arise in the following ways.

- Limits of functions. You already studied these extensively in Calculus I. They were studied there primarily because they were used to define the derivative of a function. However, they are interesting in their own right as a tool for understanding functions.
- Improper integrals.
- Definite integrals arising as limits of Riemann sums.
- Sequences, series and power series.

**Course Outline:** The following outline is only intended to be a rough guide as the material covered might be altered as the course progresses.

Sections 5.6 and 5.8: Trigonometric functions and their inverses, indeterminate forms .....	5 lectures
Sections 6.1 - 6.3, 6.5 - 6.6: Techniques of Integration .....	7 lectures
Sections 7.1 - 7.4, 7.6 - 7.7: Applications of Integration .....	7 lectures
Sections 8.1 - 8.8: Series .....	10 lectures
Sections 9.3 - 9.4: Polar Coordinates .....	4 lectures

**Grading:** Your grade will be calculated as follows:

- 10% Homework Grade, 10% Quiz Grade, 20% Midterm One, 20% Midterm Two, 37% Final.

I might add up to 3% bonus to your final grade based on your active participation. **Please be aware that class participation is not the same as attendance.** The bonus is a non-negotiable deal. Please do not come asking for it. Instead, I would highly recommend you attend the course, ask questions and participate as much as possible.

**Examinations:** There will be two midterms held during class and also a common final exam on the dates listed below. The locations will be announced at a later date. No makeup exams will be given. Requests to reschedule midterms must be made two weeks in advance of the exam date. Any grading complaints must be submitted within two weeks of the exam date. Because it is a common final exam administered by all professors, **the final exam must be taken at the scheduled time below**, and no requests to reschedule it will be considered.

## Homework and Quiz Grade:

- **Weekly written assignments will be collected in your discussion sections on Tuesdays.** These assignments will be posted to the announcements section of Blackboard and they will be emailed out to the class as well. **There will be quizzes administered every Thursday in discussion section.** Both the homework assignments and the quizzes on Tuesday and Thursday will be based in the content from the three lectures from the **previous** week. In particular, the weekly quiz will be based in the same content as the corresponding homework assignment.
- **There will be 9 homework assignments and quizzes.** I will drop the lowest homework and quiz when calculating this part of your grade in the class. If you have extenuating circumstances requiring you to miss more than one homework or quiz, you should talk to me in person to work out alternative arrangements.
- You are encouraged to discuss homework problems with your peers and to work in groups. This is the most efficient and rewarding way to learn and work. However, you must write your own solutions. **Homework that is simply copied from another source (friend, another textbook, internet, etc.) will be considered as plagiarism, a very serious offense to USC Code of Conduct.**

**Blackboard:** Weekly homework assignments and grades will be posted on Blackboard <http://blackboard.usc.edu>. **It is everyones responsibility to visit the website on a regular basis.**

**Students with disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester and a letter of verification detailing approved accommodations must be delivered to your Instructor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 AM - 5:00 PM, Monday through Friday. The phone number for the DSP office is (213) 740 - 0776.

**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 Section 11, Behavior Violating University Standards <https://scampus.usc.edu/1100-behavior-violatinguniversity-standards-and-appropriat>. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>. Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity <http://equity.usc.edu/>. This is important for the safety whole USC community. Another member of the university community such as a friend, classmate, advisor, or faculty member can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men provides 24/7 confidential support, and the sexual assault resource center webpage <https://titleix.usc.edu/> describes reporting options and other resources.