

# Math 142 Calculus II

## Sections 3 & 4, Fall 2019

**Instructor:** Frank Thorne

**Office:** LeConte 3170

**Office Hours:** Tue 11:30-12:30, Thu 9:00-10:00, Fri 9:00-10:00

**SI leader:** Marley Perlstein, marleyp@email.sc.edu

**TA:** Thomas Hamori, thamori@email.sc.edu

**Email:** thorne@math.sc.edu

**Website:** <http://people.math.sc.edu/thornef/math142/>

**Meeting times:**

Lecture:	TR 10:05-11:20, LC 412
Computer Lab:	M 8:30-9:20, LC 303A (Section 3) M 9:40-10:30, LC 303A (Section 4)
Recitation:	W 8:30-9:20, LC 121 (Section 3) W 9:40-10:30, LC 121 (Section 4)

### I. Prerequisites

Qualification through placement or by earning a **C** or better in Math 141.

### II. Course Rationale and Description

This course is the second course in the traditional calculus sequence. The course offers a balance between mathematical skills and conceptual understanding, with presentation of ideas geometrically, algebraically, numerically and verbally and with attention to applications.

### III. Learning Outcomes

A student who successfully completes Calculus II (Math 142) should continue to:

- Develop as an independent learner with the ability to approach problems from a conceptual point of view;
- Utilize more than one idea in a single problem, and to apply appropriate calculus skills to problems in context;
- Master concepts and gain skills needed to solve problems related to techniques of integrations, sequences and series, Taylor polynomials and series, parametric and polar coordinate curves.

### IV. Textbook

*Thomas' Calculus, Early Transcendentals, 13<sup>th</sup> Edition* or Custom Edition for USC, by George B. Thomas.

**Access to MyMathLab (online homework) will not be required.**

**Recommended reading:** I also recommend Silvanus Thompson's *Calculus Made Easy*:

<https://www.gutenberg.org/files/33283/33283-pdf.pdf>

### V. Course Requirements

Students are expected to read assigned sections in the text and complete homework assignments, quizzes and exams. Students should check the course website and their email frequently for announcements and course documents such as worksheets, solutions to quizzes and exams, and handouts.

### VI. Course Outline

The course will cover Chapters 8 (techniques of integration), 10 (sequences and series), and 11 (parametric and polar coordinates) from the textbook. **Please see the course website for a detailed schedule.**

## VII. Course Policies

### Attendance

Students are expected to attend class, recitations and labs, arriving on time, and staying for the entire class. Students are responsible for all material covered in class and in recitation, and for missed classes and announcements.

However, attendance will not be recorded, and no formal attendance policy will be enforced.

### Late work and make-up work

Late work will NOT be accepted. Make-up work will not be assigned, except in cases of excused absences. Arrangements for make-up work must be made with **24 hours** of the student's absence.

### Withdrawal

The last day to change/drop a course without a grade of "W" being recorded is Wednesday August 28. The last date to withdraw without a grade of WF being assigned is Wednesday November 6.

### Calculators

Calculators will not be permitted on quizzes or exams.

They are permitted on homeworks, but are recommended only to check your work.

### Honor Code

Every student has a role in maintaining the academic reputation of the university. It is imperative that you refrain from engaging in plagiarism, cheating, falsifying your work and/or assisting other students in violating the Honor Code. The honor code applies to **all** work for this course. Students should review the Honor Code at <http://www.sc.edu/policies/ppm/staf625.pdf>.

## VIII. Assessment and Grading

### Homework and Quizzes

There will be a quiz each week during recitation. There will also be weekly homework, due at the same time you take your quiz.

It is important that you **explain all work neatly, draw pictures where appropriate, and put equals signs where they belong. Sloppy work will not receive full credit.** As in real life, both correctness and presentation matter.

Homework and quizzes will be **graded together** according to the following scheme. If you ace a quiz, then that's your quiz/homework score for the week. Otherwise, your quiz score will be used as a baseline and **a single problem** will be selected randomly from the homework. If it is better than your quiz, then your quiz grade will be revised up somewhat; otherwise, your quiz grade will stand.

Your lowest two homework/quiz grades will be dropped.

### Gateways

There will be 3 gateway exams during the semester. The gateway exams are tests of skills that are important to calculus II. The first test covers limits and derivatives, the second integration techniques and the third one sequences and series. These exams are taken online in a proctored environment, during your computer lab sessions, your TA will explain this process. In order to pass a gateway exam, you must correctly answer all but one of the questions. Gateway exams can be retaken once a day for the following open periods:

Exam	Open	Close
Gateway Exam 1	September 9	September 27
Gateway Exam 2	October 14	November 1
Gateway Exam 3	November 11	November 26

### Exams

There will be three exams throughout the semester. In general, no make-up tests will be given. Exceptions may be made for documented illness or emergency, see details above. **The lowest grade in the exams will be replaced by the final's grade (if greater).** Tests are scheduled as follows:

Exam 1	Thursday, September 19
Exam 2	Thursday, October 24
Exam 3	Thursday, November 21

A cumulative final exam will be taken on **Tuesday, December 10, 9:00-11:30am**. This final exam is not optional, and may not be rescheduled without permission from the Dean.

### Exam Content

**At least half of questions on all exams will be taken verbatim from the homework assignments.** Therefore, doing the homeworks is excellent preparation for the exams!

In addition, each exam will have at least one question asking you to **explain the concepts** in this course. Such questions will be on the homeworks, so you can practice. **You are strongly encouraged to bring your solutions to professor or TA office hours for an evaluation.**

For the final exam, I will prepare two versions and choose one to be the ‘real exam’ at random. The other will be given to you in advance of the exam for practice. This will be good for **extra credit**, equivalent to a week’s quiz/homework, and the standard that work should be explained neatly and strictly will be particularly enforced.

### Grades

Grades will be weighted as follows:

20%	Homework/Quizzes
10%	Gateways
45%	Tests (3 tests, 15% each)
25%	Final Exam

You are guaranteed at least the following grades, based on your final average:

A	=	90-100,
B+	=	86-89,
B	=	80-85,
C+	=	76-79,
C	=	70-75,
D+	=	66-69,
D	=	60-65,
F	=	0-59.

## IX. Additional Help

- Student Success Center (SSC) located in mezzanine level of the Thomas Cooper Library. Website: [https://sc.edu/about/offices\\_and\\_divisions/student\\_success\\_center/index.php](https://sc.edu/about/offices_and_divisions/student_success_center/index.php)
- Math Tutoring Center: runs walk-in help desks around campus. The site also maintains a list of private tutors in math and statistics. Website: [https://sc.edu/study/colleges\\_schools/artsandsciences/mathematics/study/tutoring](https://sc.edu/study/colleges_schools/artsandsciences/mathematics/study/tutoring).
- Supplemental instruction schedule and information can be found at [https://sc.edu/about/offices\\_and\\_divisions/student\\_success\\_center/supplemental-instruction/index.php](https://sc.edu/about/offices_and_divisions/student_success_center/supplemental-instruction/index.php).

## **X. Students with Disabilities**

The University of South Carolina provides high-quality services to students with disabilities, and we encourage you to take advantage of them. Students with disabilities needing academic accommodations should: (1) Register with and provide documentation to the Student Disability Resource Center in LeConte College Room 112A, and (2) Discuss with the instructor the type of academic or physical accommodations you need. Please do this as soon as possible, **and at least a week before any assignment for which you need accommodations.**

[https://sc.edu/about/offices\\_and\\_divisions/student\\_disability\\_resource\\_center/index.php](https://sc.edu/about/offices_and_divisions/student_disability_resource_center/index.php).