Instructor: Nathan Pflueger
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office: Kassar 219
office hours: Wednesday 3-4:30, Thursday 2:45-4:00

TAs: Daniel Keliher
Stefan Minic
Justin Romanoff

Course webpage: `math.brown.edu/~pflueger/math19`

Time and location:

Section 1	1:00-1:50	Wilson 302
Section 2	2:00-2:50	Wilson 305

Course topics: Math 19 is a second-semester course in calculus, geared towards students interested in physics and engineering. The main topics are as follows.

1. Integration techniques and applications. (Strang §7, 8)
2. Vectors, polar coordinates, and motion along a curve. (Strang §11, 12)
3. Introduction to differential equations. (online readings)
4. Infinite series, especially Taylor series and Fourier series. (Strang §10 and online readings)

Applications discussed in the course will include energy, force, audio compression, and circuits.

Textbook: *You are not required to purchase a textbook for this course.* Our main text will be Gilbert Strang's "Calculus" (either edition) which is available for free online here. It is also for sale in the bookstore.

`ocw.mit.edu/resources/res-18-001-calculus-online-textbook-spring-2005/textbook/`

We will also use some other readings, which I will upload to the website when we come to them.

Homework: A set of ten to fifteen problems will be due each week (except during exam weeks), usually on Friday. *Late work will not be accepted for any reason.* However, your lowest two homework scores will be dropped.
Some homework problems will be quite challenging, and much of your learning will come from working on problems. Plan to start in advance, ask questions, and work together.

Quizzes: There will be occasional short unannounced quizzes in class. These will be graded for completion (a good-faith effort will receive full points), and the quizzes taken together will count as one homework assignment. The quizzes should not be stressful. Research has shown that short, low-stakes quizzes help students learn and retain material.

Exams: There will be three exams in this class: two in-class midterms and a final exam. *Notify me at least well in advance if you need to re-schedule an exam.*

	Time limit	Date and time
Midterm 1	50 minutes	Fri. 10/10 in class
Midterm 2	50 minutes	Fri. 11/14 in class
Final exam	3 hours	Sun. 12/14, 9am-noon

Notes on exams. You are allowed one page of notes (front and back) for each exam. It may be typed or handwritten. I suggest putting a serious effort into writing a good note sheet – research shows that you learn a lot by this process, even if you don't need to look at the sheet.

Grades: Your final course grade will be computed as follows.

Homework	10%
Midterm 1	20%
Midterm 2	20%
Final exam	30%
Your best exam score	20%

Prerequisites: You must be comfortable with differentiation. You should also some integration techniques, including substitution. Comfort with the content of AP Calculus AB is sufficient.

Collaboration policy: You are encouraged to work together freely on the homework assignments, but you must write your answers entirely by yourself.

Calculators and computers: No calculators or other electronic devices are allowed (or necessary) for the exams. You may use calculators and computers for the homework, but they will not be necessary unless explicit stated.

Disability support: Please inform me if you have a disability or other condition that might require modification of these procedures. You should also contact the Student and Employee Accessibility Services at 401-863-9588 or SEAS@brown.edu.

Come to office hours! I am happy to answer your questions and also talk about the course in general. Even if you don't have specific questions, you can come to review material or listen to other students' questions, or to visit the dog.

Charley the calculus dog: I will often have my dog Charley (pictured) with me during my Thursday office hours. She is available for all your therapy dog needs, and I will not be offended if you come to office hours just to play with her. She is very friendly and will certainly like you as long as you aren't a mail carrier.

I understand that many people are allergic to dogs or just don't like them. Please tell me if I should leave her at home.