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Course Objective

Our objective this quarter is to expand our understanding of single-variable calculus. We will make leaps principally by adding new and powerful ways of treating functions as infinite sums, then by using these new techniques to solve some otherwise intractable problems. The only prerequisites for this course are good algebra skills, command of derivatives and integrals, a mind open to new vistas, and an appreciation for the fruits of hard labor.

Methodology

Our high ambitions will necessitate various vehicles for progress.

1. Discussion. Class time will be spent discussing and working on mathematics. Your engagement in the discourse is vital. You may be called upon to offer your thoughts or work a problem at your desk. You will get out of class only what you put in.

2. Homework. Homework is assigned nightly out of the book. Each week some subset of the book problems will be turned in for grading, but that subset will not be known in advance so it is important to give each book problem due attention. “Feast or famine” is not the proper course here. Consistent and careful consideration of the homework is the surest path to success.

3. Examination. There will be two midterms and a final exam at the end of the quarter.

4. Query. Two students will be drawn randomly for a daily query at the beginning of each class.

Ethos

Our guiding belief is that we have reached a defining moment in our mathematical education. The development of calculus is one of the greatest intellectual achievements in the history of humankind. True understanding will come only to those who vigorously seek it. We are here to become the thinkers and students we have always wanted to be.
Office Hours

Our in-class discussions will likely be the proverbial “tip of the iceberg.” To facilitate sustained mathematical discussion, there will be additional times to interact throughout the week.

- M 9:10-10:00.
- T 2:10-3:00.
- R 9:10-10:00 & 2:10-3:00.
- By email and by appointment.

Exam Dates

1. Midterms:
   - Exam 1 Friday, January 22nd
   - Exam 2 Friday, February 19th

2. Final Exam:
   - 143-04: Wednesday, March 16th, 10:10am-1:00pm

Grading

Course grades will be calculated as follows:

- Query (5%)
- Homework (20%)
- Midterm Exam (2 x 20%)
- Final Exam (35%)

Academic Integrity

It is my opinion that there is hardly any human act more satisfying or important than the sharing of knowledge. I therefore consider the classroom and the university at large to be hallowed ground, well deserving of all the humility and respect that we would afford our other most sacred places.

Please refer to the University’s policy on cheating and plagiarism found in the Campus Administration Manual, Section 684.

In short: be sensible, respectful and mindful of the integrity of the system we are all so lucky to share.