Instructor: Dr. Dylan Retsek  
Office: 314 Faculty Offices East  
email: dretsek@calpoly.edu  
Web: www.calpoly.edu/~dretsek  
Phone: (805) 756-2072

Course Objective

Our objective this quarter is to extend our understanding of single-variable calculus to the multivariable setting. We will make leaps principally by building analogies to the single-variable situation and developing new techniques mandated by the presence of extra input variables. The only prerequisites for this course are a rock solid understanding of calculus I-III 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; these are never due. In addition, you will have weekly homework sets, usually due on Fridays. These are written by me and typically go beyond the book problems in depth and difficulty. Some problems are designed to practice mechanics while others enforce deeper understanding. “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 remains 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 meet throughout the week.

- M 10:00-11:00.
- T 10:00-11:00.
- R 10:00-11:00 & 2:10-3:00.
- By appointment.

Exam Dates

1. Exam I: Friday, February 1st in class.
2. Exam II: Friday, March 1st in class.
3. Final Exam:
   - 12pm Section: Monday, March 18th, 10:10am-1:00pm.
   - 1pm Section: Wednesday, March 20th, 1:10pm-4:00pm.

Grading

Course grades will be calculated as follows:

- Query (5%)
- Homework (20%)
- Midterm Exams (25% each)
- Final Exam (25%)

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.