Course description: This course starts with an introduction to vector calculus and proceeds to study scalar and vector functions of several variables, in particular, differentiation and integration of such functions. Our main aim is to establish the analogues of the Fundamental Theorem of Calculus for functions of several variables: namely, the famous Integration Formulas of Green, Stokes, and Gauss-Ostrogradsky. The beautiful Mathematics that we’d be studying stems mainly from Physical problems, especially those of electromagnetism and fluid mechanics.


Room and time: Our class meets on Tuesdays and on Thursdays at 9-25 am in HB 427.

Problem Sessions: Optional problem sessions for help with homework and course material are held each Wednesday 7pm HB 427 by Jon Fickensher (jonfick@rice.edu). While they are indeed optional, I strongly encourage you to attend them whenever your schedule permits.

Homework: Homework will be assigned and collected each class. **Late homework assignments will not be accepted for any reason whatsoever.** Homework will be in two parts: the first part is for review only and need not be submitted. The second part must be submitted. Homework assignments are not pledged. You may work with other students on the assignments, but please turn in a write-up in your own words. Homework assignments will determine 15% of your final grade.

Exams: There will be two midterm exams, each worth 25% of your final grade. The final exam will be worth 35% of your final grade. If you know you will miss an exam for a legitimate reason, notify me *well before the exam and as soon as possible*, so we can make alternate arrangements. Without an explanation in advance, a make-up exam will not be allowed.

Disability Support: It is the policy of Rice University that any student with a disability receive fair and equal treatment in this course. If you have a documented disability that requires academic adjustments or accommodations, please speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities will also need to contact Disability Support Services in the Ley Student Center.
Sequence of topics.

2. Week 5 Feb – 11 Feb: 8.1, 5.4, 5.5.
3. Week 12 Feb – 18 Feb: 6.1–6.3.
4. Week 19 Feb – 25 Feb: 6.4, 4.1, 4.2
7. Week 19 March – 25 March: 7.5, 7.6, 7.7
8. Week 26 March – 1 April: 8.1, 8.2
9. Week 2 April – 8 April: 8.3
10. Week 9 April – 15 April: 8.4, 8.5, 8.6
11. Week 16 April – 22 April: 3.1, 3.2, 3.3
12. Week 23 April – 29 April: 3.4, 3.5.