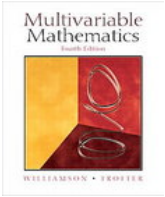
MAT 307: Multivariable Calculus with Linear Algebra
Stony Brook, Fall 2013



Text: *Multivariable Mathematics*, (4^{th} ed.) by Williamson & Trotter.
This same book will be used for both MAT307 and MAT308; it seems to come in both paperback and hardcover formats, with the *same* ISBN, so be careful when ordering. The bookstore is selling the hardback for $95 ($71.50 used).

About this course: Linear Algebra and multivariable calculus are intimately related subjects. Calculus is concerned with approximating smooth functions by linear ones. For functions of more than one variable, some additional study is required to understand exactly how these linear objects behave: this is what linear algebra is about.

MAT307 and MAT308 together cover the same material as MAT203, MAT211, and MAT303, at a slightly more theoretical level. This means that this course is going to move *quickly* and will be a significant amount of work. Since MAT307 only covers about half of the material in MAT211, students who complete only MAT307 and not MAT308 may need to take MAT211 or AMS210.

Reading: There is a lot of material in the text that can not be covered in class, and reading the relevant sections will greatly increase your comprehension, and enable you to ask intelligent questions in class. The text is rather densely written, so you may not understand it on the first or even second reading. Keep trying– it will eventually pay off. If you are having trouble reading the text, please discuss this with me!

Examinations and grading: There will be two midterm exams, weekly homeworks, and a final exam. Mathematics is not a spectator sport; you must work problems in order to fully understand[1] the material. Don't fool yourself into thinking you understand just because it makes sense when *I* do the problems.

What	When		% of Final Grade
Exam 1	approx. October 2	in class	25%
Exam 2	approx. November 6	in class	25%
Final Exam	Tuesday, December 10	8:30-11pm	35%
Homeworks, Participation, etc.			15%

Make sure that you can attend the exams at the scheduled times; **make-ups will not be given**. If one midterm exam is missed because of a serious (documented) illness or emergency, the semester grade will be determined based on the balance of the work in the course.

Webpage: `http://www.math.sunysb.edu/~scott/mat307.fall13/`

Homework and Schedule: The list of homework assignments and the most current schedule of topics can be found on the class web page. It will change, so check it regularly.

Homeworks will be due in class on the wednesday following the week they are assigned. The graded homeworks will be returned in recitation.

Instructor: Prof. S. Sutherland / Math 5-112 / 632-7306 / `scott` at `math.sunysb.edu`
Office hours: Tuesdays 1:30-3:30 in Math 5-112, Fridays 11-12 in Math P-143, and by appointment. Note that I can often be found around the department most days. Send me an email or phone first if you want to be sure I'm around, or just come by and take your chances. I'm around a lot, though sometimes you'll have to wait a bit.

TA and grader: Shaosai Huang / Math S-240G / `shaosai.huang` at `stonybrook.edu`
Office hours: TBA.

[1] "One learns by doing a thing; for though you think you know it, you have no certainty until you try." (Sophocles)

Disabilities: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at http://studentaffairs.stonybrook.edu/dss/ or (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website:http://www.stonybrook.edu/ehs/fire/disabilities.shtml.

Academic Integrity: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is **always** wrong, whether this is another student's work or taken uncredited from websites or solution manuals. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/.

Critical Incident Management: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.