Physics P113 (86254)   Monday, Wednesday 3:30 – 4:50pm

Instructor: Theodore Drivas (`tdrivas@math.stonybrook.edu`)
Office: Math Tower 4–114
Office Hours: Tuesday 1:00-3:00pm, or by appointment.
Course Webpage: `https://www.math.stonybrook.edu/~tdrivas/MAT307.html`

Recitation sections:
    R01 86255   Monday 5:00 – 5:55pm   Physics P122   Connor Lehmacher
    R02 88427   Thursday 5:00 – 5:55pm   Physics P123   Connor Lehmacher

Course Description. This course will cover material in *Vector Calculus* by J. Marsden and A. Tromba. Topics include introduction to linear algebra: vectors, matrices, determinants. Limits and differentiation of vector valued functions, Taylor's formula, optimization, integration in two- and three-dimensional spaces as well as line and surface integrals, and the integration theorems (Green, Gauss, and Stokes) generalizing the fundamental theorem of calculus in dimension one. Together with MAT 308, it forms a 2-semester sequence covering the same material as the 3-semester sequence of MAT 203, MAT 211 and MAT 303. **Credits**: 4 **SBC**: STEM+

Textbook: J. Marsden and A. Tromba, Vector Calculus, 6th edition.

Prerequisites: MAT 127 or MAT 132

Exam Dates
- Midterm: Weds 10/16 – in class
- Final: Mon 12/16, 5:30–8:00 pm

Graded Components
- **Quizzes** – 40% (12 total, lowest two quiz scores will be dropped)
- **Midterm** – 30% (cumulative)
- **Final** – 30% (cumulative, with post-midterm focus)

Gradescope. Please register for Gradescope (assignments and grading platform for the course) on gradescope.com. Use the entry code "**PXDZ5E**" when registering, this will insure you will be added to the right course. Please submit jpeg files for each problem (quizzes and tests):
- Either login into Gradescope and choose the course MAT307 or click the Gradescope item in the navbar in Brightspace
- Chose the assignment you want to submit (note you will need to select the right recitation number when submitting quizzes)
- Chose "submit images"
- Select images for each problem (if you did not solve the problem, submit empty image)
- Submit your assignment

Homework. Homework will be assigned each week and posted to the website
        `https://www.math.stonybrook.edu/~tdrivas/MAT307.html`
The homework will *not* be collected. Instead there will be a quiz in recitation which will feature a randomly chosen problem from the prior week's HW. You are encouraged to write careful solutions and discuss homework problems with your fellow classmates, and to feel free to email the professor or TA questions or go over their solutions.

Quizzes. As part of the course, you are enrolled in one of the **recitations**. Most weeks will feature a short quiz. **Each quiz be comprised of one randomly selected problem from the previous week's homework.** You must take a picture of this problem after and submit

to gradescope right away – turn in the physical problem to your TA. There will be 12 quizzes throughout the semester (see website for dates). Two lowest scores will be dropped.

Exams. No make-up exams will be given. If a student misses a midterm exam with documented evidence, then the student's final exam grade will be substituted for the missed midterm. A student must sit the final at the scheduled time in order to receive a passing grade in the class.

Student Absences Statement. Students are expected to attend every class, report for examinations and submit major graded coursework as scheduled. If a student is unable to report for any exams or complete major graded coursework as scheduled due to extenuating circumstances, the student must contact the instructor as soon as possible. Students may be requested to provide documentation to support their absence and/or may be referred to the Student Support Team for assistance. Students will be provided reasonable accommodations for missed exams, assignments or projects due to significant illness, tragedy or other personal emergencies. In the instance of missed lectures, the student is responsible for the material covered. Please note, all students must follow Stony Brook, local, state and Centers for Disease Control and Prevention (CDC) guidelines to reduce the risk of transmission of COVID. For questions or more information, visit https://www.stonybrook.edu/commcms/comingback/students.php.

Student Accessibility Support Center Statement. If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

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. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic-integrity/index.html

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 Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Syllabus Revision. The instructor reserves the right to modify the standards and requirements in this syllabus. Notice of such changes will be by announcement in class, and changes to this syllabus will be posted on the course website.

This syllabus was last revised on August 26, 2024.