SAN JOSE STATE UNIVERSITY
Fall 2013
Course: Math/CS 112, Vector Calculus

Instructor: Dr. Saleem  Office: MH 313  Phone: 924-5141  email: Mohammad.Saleem@sjsu.edu
Classroom: Clark Hall-234, MW 12 noon to 1:15.  
Course Website http://www.math.sjsu.edu/~saleem

Office Hours: MTWTh 9:50-10am (between classes, DH-243); MTWTh 10:50-11:35 AM (First 15 minutes in DH-243, then in MH-313); M&W 1:15pm -1:30 after "Vectors" class in Clark Hall 234.

Catalogue Description: Vector fields, line and surface integrals, Green’s Theorem, Stokes’ Theorem, Divergence Theorem & advanced topics such as differential forms or applications to mechanics, fluid mechanics, or electromagnetism. Prerequisite: MATH 32 (with a grade of "C-" or better) or instructor consent. 3 units.

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Text & Material to be covered: Vector Calculus by P.C. Matthews. Published by Springer.
Chapters 1, 2, 3, 4, 5, 6 and parts of 8. Skip Chapter 7. Some additions & omissions may be necessary.

Reference books: Introduction to Vector Analysis (Davis & Snyder), Div, grad, curl & all that (H.M. Schey).

Adding/Dropping: In case the class is already full, and the waiting list is too long, a test based on pre-requisites will determine which student/s can be added. Repeating students have the lowest priority.

Goals: This course is a continuation of math-32, covering vector calculus in \( \mathbb{R}^2 \) and \( \mathbb{R}^3 \) and its applications to science and engineering. This course focuses on concepts & computation rather than proof, with selected applications of the theory to such fields as mechanics, fluid mechanics, aerodynamics, gas dynamics, electromagnetism and astrodynamics. Students should be prepared to spend about 8 hours per week on reading and homework.

GRADING (Total of 550 Points. A- grade starts at 90%, B- at 80%, C- at 70% and D- at 60%.)
   Homework         50 Points  Will be posted to the course website weekly. Late penalty 20% per day.
   TEST 1(Chapters 1 & 2)  100 Points  Wednesday, 9-25-2013
   TEST 2(Chapters 3 & 5)  100 Points  Wednesday, 10-30-2013
   TEST 3(Chap. 4, 6 and 8) 100 Points  Wednesday, 12-04-2013
   CUMULATIVE FINAL EXAM 200 Points  Thursday December 12 (9:45AM to 12 noon)
(The final exam will be based on everything covered during the semester.)

Homework: For 3 hours of instruction per week, be prepared to spend about 6 hours on reading and homework. You must pay attention in class and keep a record of all the homework problems. Homework will be collected, and graded. We will discuss solutions to some homework problems, but not all. You will learn best if you think hard about each problem and write a partial solution before you see an answer. It is obvious that "you learn math by doing it and not by watching the instructor solve problems on the board". Time spent on homework pays off during a test, especially because many homework problems will appear on tests.

Tutoring centers: “peer connections” http://peerconnections.sjsu.edu and Math-Lab MH-221

Make-up tests: You will receive a “zero-score” for missing a test. There will be no "make-ups". In case of unusual circumstances please contact me before the exam (via phone, message, in-person, note, ...). Proof of sickness, accident, brother's wedding, “my car broke down just before the quiz/exam” etc., will be required. If you were in regular attendance and your reason for missing a test is accepted as "valid", then your final exam grade will be counted in place of a missed test. The pace for this course is fast, so if you are left behind for some reason, be prepared to “catch up” at your own risk. An “Incomplete” grade will not be given on the basis of poor performance.

Cheating: The campus academic integrity policy requires you to be honest in all your academic course work. Cheating on any quiz or exam may result in an F grade in the course. On homework you can consult with other students on general matters. A copied homework is cheating. on tests, exposing your work so others can copy, is also cheating. Students are expected to be aware of the Academic Integrity Policy at SJSU. The policy on academic integrity can be found at (http://www2.sjsu.edu/senate/S04-12.htm)

Academic integrity statement (from Office of Judicial Affairs): “Your own commitment to learning, as evidenced by your enrollment at San José State University, and the University’s Academic Integrity Policy requires you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Judicial Affairs.”

Disability: If you need course adaptations or accommodations because of a disability, please see the instructor privately or during regular office hours. The Disability Resource Center, DRC, is now called Accessible Education Center, AEC, phone (408) 924-6000, website:  http://www.drc.sjsu.edu

Campus policy in compliance with the Americans with Disabilities Act: “If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with your instructors as soon as possible, or see them during office hours. Presidential Directive 97-03 requires that students with disabilities register with AEC (http://www.drc.sjsu.edu/) to establish a record of their disability.”
Class attendance

According to University policy F69-24, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

Important Dates

Tuesday ....................... September 3 .............. Last Day to Drop Courses Without a “W” grade
Tuesday ....................... September 10 .......... Last Day to Add Courses & Register Late
Monday ....................... September 2 .............. Labor Day Holiday / Campus closed
Monday ....................... November 11 .......... Veteran’s Day Holiday / Campus closed
Thursday & Friday ........ November 28, 29 ....... Thanksgiving Holidays / Campus closed
Monday ....................... December 9 .............. Last day of classes

Cumulative Final Exam Thursday, December 12, 9:45AM to 12 Noon.