Math 141.03
CAC 124
Probability, Linear Systems, and
Multivariable Optimization
Fall 2011

Instructor: Dr. Don Thompson
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Office Hours: M 10-11, T 11-12, F 12-1

Learning Outcomes:
The Calculus was conceived in the 17th century by Isaac Newton and Gottfried Wilhelm Leibniz. It is applicable in every field of science, ranging from Economics to Physics. Probability Theory and Linear Algebra developed independently in the 17th-19th centuries, largely because of the work of Pascal, Fermat, and Gauss. These two fields are foundational for all stochastic (non-deterministic) studies and for all systems of mathematical study involving more than one variable. At the completion of this course, the student will be able to do the following: Explain the meaning and typical application of partial derivatives and multiple integrals; Manipulate and solve matrix algebra equations and problems by hand; Count and Enumerate discrete sets of multiple stage experiments; Explain the core principles underlying probability theory; Solve classical problems in discrete and finite probability sample spaces; Explain and solve problems with descriptive statistics and the Normal Distribution; Explain the fundamentals of Markov processes and simple Game Theory; Apply the methods of the finite mathematics to classic problems in Business & Economics. These course learning outcomes align with the following learning outcome in the business and international business programs: *Evaluate accounting and business problems from the perspective of multiple business disciplines and then formulate, communicate, and defend recommendations to decision-makers based on those evaluations.*

University Mission:
This course supports the mission of the university because the study of mathematics in a business program is one of our high standards of academic excellence.

Plagiarism:
May result in an automatic failure in the class. It is plagiarism if you (1) borrow a paper from another student, (2) turn in a paper written by any other person, (3) take material (pages, paragraphs, sentences, or ideas) from any printed source without giving credit. See http://seaver.pepperdine.edu/academicintegrity.

Disability Services:
Any student with a documented disability (physical, learning, or psychological) needing academic accommodations should contact the Disability Services Office (Main Campus, Tyler Campus Center 264, x6500) as early in the semester as possible. All discussions will remain confidential. Please visit http://www.pepperdine.edu/disabilityservices/ for additional information.

Textbook:
Finite Mathematics & Its Applications, Second Custom Edition for Pepperdine University, Pearson Custom Publishing, 2008. ISBN #0-558-92541-3

Examination Schedule:
Test 1 – Sep. 23; Test 2 – Oct. 21; Test 3 – Nov. 18; Test 4 (Final Exam)– Dec. 14, 10:30-1:00

Homework:
Check my website for all homework assignments and due dates.

Grading:
Tests – 90% (20%, 20%, 20%, 30%)
Homework – 10%

Repetition:
The best way to learn anything, especially mathematics, is by repetition and preparation. Accordingly, homework will be assigned daily, graded and returned. Buy three Blue Books from the bookstore for homework submission.

Attendance:
It is your job as a student to come to class, read the book, work problems, and ask questions when you don't understand material. Tardiness and leaving early both represent full absences. You have 2 excused absences, following which your final course average will be decremented by 1% per absence. Absences on Fridays count double.