MATH 524 – Nonlinear Optimization

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Meeting Times MWF 11:15AM–12:05PM, LeConte College 401A

Office Hours MW 9:00–10:30, and by *prior* appointment

Text Peressini, Sullivan, Uhl, *The Mathematics of Nonlinear Programming*, Springer-Verlag, 1988.

Prerequisite Completion of Math 526 or 544 with a grade of C or better; or consent of the Mathematics Department.

Course Content The basic problem that is addressed in any course in nonlinear programming is to find the optimal values (maximum or minimum) of a nonlinear function on a prescribed domain. Our investigation of these problems will make use of your background in Calculus and Linear Algebra. In addition we will to develop some new techniques, including coercive and convex functions, that wil enable us to analyze more complicated problems.

Grading Your grade in this course will be based on your performance on homework assignments, 2 mid-term exams, and a final exam. The weights assigned to each of these components will be:

Homework	25%
Mid-term exams (2)	50%
Final exam	25%

Course grades will be determined according to the following scale:

A	90 –100
B	80 – 89
C	70 – 79
D	60 – 69
F	0 – 59

Exams The two (2) mid-term exams will be given in class. *Tentative* dates for these exams are:

Friday, September 29	(Chapters 1 and 2)
Friday, November 10	(Chapters 3 and 4)

Make-up exams will be given only for documented reasons of illness, family emergency or participation in a University sponsored event. Excuses such as oversleeping, forgetting the time or location of the exam, and lack of studying are explicitly noted as unacceptable grounds for the administration of a make-up exam.

A comprehensive final will be given at 9:00A.M. on Monday, December 11, 1995.
(Do not trust exam schedules published by unofficial sources, e.g. the Mortar Board.)

Homework Assigned problems will be collected once each week, typically on Monday. Homework will be graded and returned as quickly as possible. Your homework grade will be determined by your nine (9) highest homework scores. *No late homework will be accepted.*

Academic Honesty Cheating and plagiarism will not be tolerated in this course. You may discuss homework problems with others, but do not copy solutions from another student or from a book. Violations of this policy will be dealt with in a matter consistent with University guidelines.