MATH 120: OPTIMIZATION

GENERAL INFORMATION:

Lecture (30672): MWF 9:10 AM - 10:00 AM
Room: HMNSS 1503
Instructor: Muralee (Dr. M. Muraleetharan)
Office: 225 Surge Building
Phone: (951) 827-6482
E-mail: muralee@math.ucr.edu
Office hours: MW 10:10 AM- 11:00 AM, and by appointment

Teaching Assistant:
RANDALL, LUCAS:
Discussion (120 002): R 8:40 AM - 9:30 AM. Room: Surge 172
Discussion (120 003): R 5:10 PM - 6:00 PM. Room: Surge 172

Textbook: An Introduction to Optimization, Third Edition, by E.K.P Chong and S.H. Żak.

EXAMS AND GRADING:

Homework: 8 - 10 Homework sets
Midterm exam: Friday 10/29/10, during the lecture.
Final exam: Friday 12/10/10, 3:00 PM - 6:00 PM
Grading: The final grade is composed of:
  50% of the Final exam grade
  30% of the Midterm exam grade
  20% of the Homework/Quiz

Your lowest homework score will be dropped.
The following grading scale will be used:
A student with an average of at least 90% will receive a grade of at least A-.
A student with an average of at least 80% will receive a grade of at least B-.
A student with an average of at least 65% will receive a grade of at least C-.
A student with an average of at least 50% will receive a grade of at least D-.

1. The final exam is comprehensive.
2. All exams are closed notes and books. Calculators are not allowed.
3. No make up exams - If you miss the midterm because of a documented medical situation or family emergency, the grade will be computed without taking into account the missed exam.

COURSE OUTLINE:
Prerequisites: MATH 10A AND MATH 113 **OR** MATH 10A AND MATH 131. If you are unsure whether your background is adequate for this course, please make an appointment to discuss this with me immediately.

Topics include Classical nonlinear optimization: unconstrained and constrained problems in several variables, Jacobian and Lagrangian methods, and the Kuhn-Tucker conditions, linear programming, simplex method, duality, and applications to other subjects (Chapters 3,4,5,6,15,16,17,19, & 20 from the textbook). For each topic covered, a list of **suggested practice problems** will be assigned, usually about ten. These problems will be used directly or as templates for problems on examinations. Students should prepare all of these problems. Each week a selected number of problems from the "practice problems" will be collected for grading. **All work must be submitted on time; no exceptions**. A student will receive a grade of "0" for each missed or late assignment.

CLASS MEETINGS and ATTENDANCE: Classes will meet four times each week. Lectures will be given on Monday, Wednesday, and Friday. Each section will meet for one discussion each week on Thursday. **Attendance is required**.

COLLABORATION and ACADEMIC INTEGRITY: Students are encouraged to work cooperatively on practice problems. There is quite a bit of evidence that this sort of collaboration improves performance in mathematics courses. However, all work submitted for grading must be the work of the individual submitting the work. No collaboration is permitted on work submitted for grading. Copying another student's homework is a violation of the University Code of Conduct.