Analysis and Optimization
S2500D summer 2013

Time: MTWR 2:45pm - 4:20pm
Place: 407 Math

Instructor: Zhengyu Zong
Email: zz2197@math.columbia.edu
Office hours: Monday 1:30pm-2:30pm in 307 Math

Teaching assistant: Daniel Gulotta
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Office hours: Wednesday 12:30pm-2:30pm, 5-6pm, Thursday 12:30pm-2:30pm, Friday 1-4pm in 406 Math

ISBN : 9780273713289
This book should be available at the Columbia bookstore.
Another reference is Henry Pinkham's lecture notes, which is available online http://www.math.columbia.edu/~pinkham/

Tentative topics: The plan for the course is to cover chapters 2-3 and 8-9 of the textbook. Topics are review of analysis and linear algebra, basic concepts of topology and convexity, static optimization including Lagrange multipliers, second order test, convex optimization and Kuhn-Tucker condition, calculus of variation and control theory. If time allows, I will discuss some more advanced topics.

Prerequisites: multivariable calculus and linear algebra

Grading:
Homework: 30%
Midterm 1: 20%
Midterm 2: 20%
Final: 30%

Homework: Homework will be assigned weekly and will be due on Mondays before class. No late homework will be accepted.

Midterm 1: June 10, in class

Midterm 2: June 24, in class
Final: July 3, 2:45-5:45pm in 203 Math

Students with disabilities: Students with disabilities requiring special accommodation should contact the Office of Disability Services (ODS) promptly to discuss appropriate arrangements. The ODS website is the following:
http://health.columbia.edu/services/ods/support/testing