Tentative Schedule of Math 171B, Spring 2016

Instructor: Jiawang Nie

The textbook is *Numerical Optimization* (by Philip Gill and Margaret Wright, 1998). To obtain an electronic copy, send a request email to the instructor.

Week 1:
- 3/28: Eigenvalues and Singular Values
- 3/30: Vector Norms
- 4/01: Matrix Norms

Week 2:
- 4/04: Convergence of Sequences
- 4/06: Properties of Univariate Functions
- 4/08: Properties of Functions of Many Variables

Week 3:
- 4/11: The method of bisection
- 4/13: Newton’s method for zero-finding
- 4/15: Secant and regula falsi methods

Week 4:
- 4/18: Newton’s Method
- 4/20: Review
- 4/22: Midterm I

Week 5:
- 4/25: Optimality Conditions (I)
- 4/27: Optimality Conditions (II)
- 5/29: Optimality Conditions (III)

Week 6:
- 5/02: Minimizing a Function of One Variable (I)
- 5/04: Minimizing a Function of One Variable (II)
- 5/06: Model-Based Methods for Functions of Many Variables (I)

Week 7:
- 5/09: Model-Based Methods for Functions of Many Variables (II)
- 5/11: Line Search Methods (I)
- 5/13: Line Search Methods (II)

Week 8:
- 5/16: Review
• 5/18: Midterm II
• 5/20: Equality Constraints - Optimality Conditions (I)

Week 9:
• 5/23: Memorial Day
• 5/25: Equality Constraints - Optimality Conditions (II)
• 5/27: Quadratic Problems with Equality Constraints

Week 10:
• 5/30: The Method of Multipliers
• 6/01: Inequality Constraints - Optimality Conditions (I)
• 6/03: Inequality Constraints - Optimality Conditions (II)

Week 11:
• 6/09: Final Exam (3:00 - 5:59, Friday)