Optimization Techniques

Course outline:

1. Review of Linear Algebra.
2. Matrix Decomposition (SVD)
3. The least square solutions.
4. The Unconstrained Optimization.
5. Lagrange multipliers.
6. Formulation of Optimization problem.
7. The CVX.
8. The Simplex Method.
9. Convex Optimization.
10. Application of Optimization

Course reference book:

Bernard Kolman and Robert E. Beck, Elementary Linear Programming with Applications 2^{nd} Ed.

Reference Books:

Convex Optimization by Stephen Boyd

Introduction to Linear Programming by Gilbert Strang, 4^{th} Ed.

Internet

Lecture timings:

Saturday: 9 am - 12 pm

Assessment breakup:

	test(s)	assignment(s)	class participation	mid-term 1	final	Total
Theory				30	40	100