Econ 413a. Optimization Techniques

**Day / time:** T/Th 1:00 - 2:15 pm  
**Course Type:** Undergraduate  
**Course term:** Fall  
**Instructor(s):** Sekhar Tatikonda

Fundamental theory and algorithms of optimization, emphasizing convex optimization. The geometry of convex sets, basic convex analysis, the principle of optimality, duality. Numerical algorithms: steepest descent, Newton’s method, interior point methods, dynamic programming, unimodal search. Applications from engineering and the sciences.

Prerequisites: MATH 120 and 222, or equivalents. May not be taken after AMTH 237.

[Also AMTH 437 / EENG437/S&DS 430]

**Semester offered:** Fall  
**Undergrad Course Category:** Microtheory

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