Applied Mathematics 425   Introduction to Optimization

(see Course Descriptions for the applicable academic year: http://www.ucalgary.ca/pubs/calendar/)

Syllabus

Topics	Number of Hours
Unconstrained optimization: one variable, several variables	9
Convex optimization: convex sets and convex functions optimal conditions, geometric programming	4
Introductory numerical methods: one dimensional searches, Newton's method (in several variables), steepest descent	5
Practical numerical methods: conjugate gradient, quasi-newton	5
Least squares: least squares fit, minimum norm solutions	5
Linear programming: simplex method, primal-dual method	5
Constrained optimization: penalty methods, Lagrange multipliers	5
TOTAL	36

* * * * * * * *