

University of Delaware
Department of Mathematical Sciences

MATH-529 – Fundamentals of Optimization
Instructor: Dr. Marco A. MONTES DE OCA
Spring 2013

Homework 6

Due date: May 14, 2013

Problems

1. Implement the augmented lagrangian method using the source code for the penalty method for constrained optimization problems as starting point. The code is available at <http://math.udel.edu/~mmontes/teaching/UD/S13-MATH529-10.html#Code> under the “Penalty Method” link. Use the same constrained optimization problem used in class as example (the code for this problem is included).

Compare the speed of convergence of the penalty method with that of the augmented lagrangian method by plotting the value of the objective function vs. the value of μ , the penalty parameter, as the optimization process progresses.