CS 4433/5433
COMPUTATIONAL METHODS IN DISCRETE OPTIMIZATION
Fall 2015

Instructor:  Dr. K. Thulasiraman
Office:      DEH 235
Email:       thulasi@cs.ou.edu

Course Time: 3-4:15 PM
Office Hours: Tuesday  9:00 -10:30 AM
                  Wednesday 9:00 -10:30 AM

Course Outline
I.  Linear Programming:
    • Simplex Method
    • Degenerary and Anticycling Strategies
    • Initialization
    • Revised Simplex Method
II. Duality Theory
    • Primal and Dual Program
    • Duality Theorem
    • Complementary Slackness
    • Sensitivity Analysis
    • LP Problems In General Form

III. Network Optimization:
    • The Transshipment Problem and Optimality Conditions
    • The Network Simplex Method
    • Shortest Paths
    • The Max Flow Problem

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test #1</td>
<td>(2 hours)</td>
</tr>
<tr>
<td>Test #2</td>
<td>(2 Hours)</td>
</tr>
<tr>
<td>Final</td>
<td>(3 Hours)</td>
</tr>
</tbody>
</table>

Text:
2. Lecture Notes and Additional Material will be made available.