MGT 40750 – Quantitative Decision Modeling
Spring 2017

Network Models
Integer and Nonlinear Programming

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Optimization

- Optimization
    - Linear programming
    - Network models
    - Integer programming
    - Nonlinear programming

Network Models

- **<u>Main Idea</u>**: Efficiently planning and controlling the movement of subjects through the network.
- Examples:
  - Supply Chain: Walmart, Dell, Amazon, FedEx
  - Transportation models
  - Shortest path models

Example: Shortest Path for Messaging

- Consider the mobile social network among students in MGT 40750.

- Question: Find the shortest path between a pair of nodes through this mobile social network.