MIS 0855 – Data Science (Section 002) – Fall 2016
Exam #2 Guide

<u>Read class slides, reading assignments, and in-class exercises. Take a look at videos posted on the class site.</u>

Week 05 - Data Visualization (I)
- Four data visualization principles
- The message from Nightingale's Coxcombs
- The message from drug price graphs
- When to use a table instead of a graph. When to use a graph instead of a table
- When to use a bar chart, a line chart, a pie chart, and a scatter plot, for what?

Week 06 – In-Class Exercise – Advanced Data Visualization
- How to create a dual line chart
- What information is available from a box plot
- What is the name of this chart? (among dual line chart, bubble chart, box plot, bullet graph, histogram)

Week 07 – Data Visualization (III)
- Watch the YouTube video for Week 7
- A pie chart with the total percentages greater than 100%
- A bar chart without 0 in the vertical axis
- The correct size of squares
- State leader vs. national leader
- Why a 3-D chart is misleading
- Why using as little link as possible

Week 08 – Dirty Data
- Watch the two videos for Week 8
- Why data gets dirty
- The origin of dirty data
- The agency problem and a solution to fix that problem
- A vicious cycle from dirty data
- What to do with outliers (usually large data)
- Activities in data cleansing
- Five characteristics of high-quality data
- Trade-off in data cleansing