MIS5102: Process Improvement and Innovation

Course Introduction
Key elements of this course

Systems Analysis

Innovation

Project Management
What is Business Systems Analysis?

The study of sets of interacting entities (Wikipedia)

The study of an activity or procedure to determine the desired end and the most efficient method of obtaining this end (Answers.com)
What is Project Management?

The discipline of planning, organizing, securing, and managing resources to achieve specific goals (Wikipedia)
Both systems analysis and project management are about understanding processes.
"More than 3,200 US prisoners have been released early because of a software glitch. The bug miscalculated the sentence reductions prisoners in Washington state had received for good behaviour." (BBC, 2015)


"The tech world is still pondering precisely what caused a massive point-of-sale computer outage at Starbucks last week that left millions of customers in the United States and Canada in various states of caffeine withdrawal. The grande glitch, which began on Friday night and ended on Saturday, forced some managers to briefly close their stores." (Computerworld, 2015)

http://www.thestreet.com/story/13128128/1/starbucks-has-a-venti-computer-problem.html
Why Care?

“IBM is taking supply chain technology that it first used in the pharmaceutical industry to track pills from the manufacturer to retail stores and is applying it to the pork industry.” (Computerworld, 2011)

The CDC announced it was investigating an outbreak of what seems to be a different and rare version of E. coli 026 that’s sickened five people in two states who ate at Chipotle in mid-November. The company... still doesn’t know which ingredients made people ill....” (Bloomberg, 2015)
Two ways of thinking about processes

- **Systems Thinking**
  - Considering the system as a collection of integrated processes
  - Synthesize and optimize

- **Process Thinking**
  - Considering the system as a collection of independent processes
  - Decompose and optimize
Thinking about the system as a whole

Consider the “boundaries” of each component

What other components affect this component?

What other components is this affected by?

http://blog.metasd.com/category/tools/visualization/page/2/

R = reinforcing
B = balancing
+ = increases
- = decreases
Road map for the course...

- **Process Thinking**
  - Process modeling
  - Process decomposition

- **Systems Analysis**
  - Defining the problem
  - Requirements gathering

- **Project Management**
  - Portfolio management
  - Project planning

- **Managing Complexity**
  - Change management
  - Conflict management