Introduction to Business Statistics

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STAT 226 - Iowa State University

August 20, 2018

Course outline

- Part 1 - Midterm 1
  - Modules 1-4
  - Chapters 1-4,12,14.1
- Part 2 - Midterm 2
  - Modules 5-6
  - Chapters 15,16
- Part 3 - Final Exam
  - Modules 7-8,9(?)
  - Chapters 6,19,21,12(?),13(?)

Part 1 Outline

Content through the first exam

- Module 1
  - Chapter 1 – Introduction: "What is Statistics?"
  - Chapter 2 – Data
  - Chapter 3 – Describing Categorical Data
- Module 2
  - Chapter 4 – Describing Numerical Data
- Module 3
  - Chapter 12 – The Normal Probability Model
- Module 4
  - Chapter 14.1 – Sampling Distribution of the Mean

Statistics

Definition
The field of Statistics is the mathematical science involving the collection, analysis, and interpretation of data.

There are a number of specialties that have evolved to apply statistical methods:

- Actuarial science
- Business analytics
- Psychometrics
- Quality control
- Reliability engineering
- Statistical finance

Business statistics

Definition

Business Statistics? Business statistics is the science of good decision making in the face of uncertainty and is used in many disciplines such as financial analysis, econometrics, auditing, production and operations including services improvement, and marketing research. (JBES, 1993) [a]

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[a]from Wikipedia referencing the Journal of Business and Economic Statistics

- virtually all business decisions are based on information gathered from data
- statistics is about extracting helpful information from data
- to be helpful, data have to be representative (more later)

Chapter 1 – Introduction
What is Business Statistics used for?

- Inventory management
- Price prediction
- Evaluation of advertisement

Why should you care?
"It made all the difference in my career and could in yours too." (former manager & Vice President of M.I.S. at Hy-Vee in Des Moines)