Business Statistics 207  
Summer, 2014

Instructor: Phil Fry  
Office: MEBB 3237  
e-mail: pfry@boisestate.edu  
Office Phone: 426-4276

Course Site: Blackboard  
Office Hours: 9:15-9:45(before class) & by Appointment


Prerequisites: ITM 104, ITM 105 (or successful completion of placement examinations) and Math 143.

Corequisite: Math 160 (Math 143 is the prerequisite for Math 160)

Overview: This is the first semester of a two semester course in business statistics. The objective of BUSSTAT 207 is to introduce the student to descriptive and inferential statistical analysis with an emphasis on how statistical tools can be applied to business decision-making. The course will cover the basic tools used to transform data into information. In addition, the course will present the fundamentals of statistical inference showing how it is possible to examine a small subset of data to reach conclusions about the larger set of data. On completing this course successfully with a grade of C- or higher, students will be able to

- Formulate a plan for collecting sample information that may be analyzed using statistical tools
- Summarize and present data in an effective manner through graphs, charts, tables, and numerical measures
- Model and explain business data and relationships using probability as a tool
- Model and explain the results of random sampling in business using the binomial and normal probability distributions
- Develop and interpret confidence interval estimates for the characteristics of a single population and for comparisons of the characteristics of two populations
- Formulate and analyze statistical hypotheses about the characteristics of a single population or about the comparison of two populations
- Effectively communicate the results of a statistical analysis both orally and in writing
- Use Excel software as a tool to store, organize, analyze and present data

Students will be required to demonstrate competence in the above items through a variety of assessment techniques including applied examinations, short quizzes, and assignments.

<table>
<thead>
<tr>
<th>Students in this class will learn or practice the following COBE Core Curriculum concepts, methods, and skills:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand and apply analytical and disciplinary concepts and methods related to business and economics:</td>
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</tbody>
</table>
Academic Honesty:
Students are expected to uphold the school's Code of Conduct relating to academic honesty (see p. 22 of the 2012-13 Boise State University Undergraduate Catalog). Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, problem sets, and projects must be that of the student's own work. Any violations may result in disciplinary action.

The penalty for violating the honor code is severe. Any student violating the honor code is subject to receive a failing grade for the course and/or suspension or expulsion from the university. If a student is unclear about whether a particular situation may constitute an honor code violation, the student should meet with the instructor to discuss the situation.

Login to Course Web Page Using Blackboard
Note: If this is your first time to log into Blackboard, use your student ID number for both your User name and your password. If you have had other Blackboard classes, use your ID as your User Name and your own personal password from last semester. Also, if you have a personal e-mail address, rather than your Boise State address, you will need to log into Bronco Web and change your e-mail address to the personal e-mail address that you prefer.

Examination & Assignments:

There are two semester examinations and one comprehensive final examination. There are also problem set assignments. The possible points for the semester are as follows:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination I</td>
<td>75 points</td>
</tr>
<tr>
<td>Examination II</td>
<td>75 points</td>
</tr>
<tr>
<td>Final Examination</td>
<td>100 points</td>
</tr>
<tr>
<td>Problem Sets</td>
<td>50 points</td>
</tr>
</tbody>
</table>
The following grading scale will be used to determine final grades:

<table>
<thead>
<tr>
<th>Total Points Earned</th>
<th>Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>276 - 300</td>
<td>A</td>
</tr>
<tr>
<td>267 - 275</td>
<td>A-</td>
</tr>
<tr>
<td>264 - 266</td>
<td>B+</td>
</tr>
<tr>
<td>246 - 263</td>
<td>B</td>
</tr>
<tr>
<td>236 - 245</td>
<td>B-</td>
</tr>
<tr>
<td>230 - 235</td>
<td>C+</td>
</tr>
<tr>
<td>212 - 229</td>
<td>C</td>
</tr>
<tr>
<td>204 - 213</td>
<td>C-</td>
</tr>
<tr>
<td>174 - 203</td>
<td>D</td>
</tr>
<tr>
<td>Less than 174</td>
<td>F</td>
</tr>
</tbody>
</table>

Tentative Course Outline:

The following is a tentative course outline. Modifications to dates and topic coverage may be necessary during the semester. Please check the blackboard site for updates and changes that may occur.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Primary Learning Objectives</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/9</td>
<td>Collecting &amp; Describing Data</td>
<td>Methods for collecting &amp; describing data. Types of data. Sampling techniques. Frequency distributions, histograms, stem and leaf diagrams, line charts, scatter diagrams</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>6/10</td>
<td>Describing Data Numerically</td>
<td>Measures of central tendency. Measures of variation. Box and Whisker plots. Using the mean and standard deviation together. Tchebycheff’s Theorem, Standardized data values.</td>
<td>3</td>
</tr>
<tr>
<td>6/11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6/12</td>
<td>Introduction to Probability</td>
<td>The basics of probability and probability rules. Bayes’ Theorem. Mean and standard deviation of discrete distributions.</td>
<td>4</td>
</tr>
<tr>
<td>6/16</td>
<td>Discrete Probability Distributions</td>
<td>The binomial probability distribution. The Poisson and Hypergeometric probability distributions.</td>
<td>5</td>
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<tr>
<td>6/17</td>
<td></td>
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<tr>
<td>6/18</td>
<td>Examination I- Chapters 1-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Review/Content</td>
<td>Page</td>
</tr>
<tr>
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<tr>
<td>6/19-6/23</td>
<td>Introduction to Continuous Probability Distributions</td>
<td>The Normal Probability Distribution &amp; Other Continuous Distributions</td>
<td>6</td>
</tr>
<tr>
<td>6/24-6/30</td>
<td>Introduction to Sampling Distributions</td>
<td>Sampling Error. Sampling distribution of the mean. Sampling distribution of a proportion.</td>
<td>7</td>
</tr>
<tr>
<td>7/1</td>
<td>Examination 2 – Chapters 6,7,&amp; 8</td>
<td></td>
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<tr>
<td>7/2-7/3</td>
<td>Introduction to Hypothesis Testing</td>
<td>Hypothesis tests for means. Hypothesis tests for proportions. Type II Errors.</td>
<td>9</td>
</tr>
<tr>
<td>7/10</td>
<td>Comprehensive Final Examination</td>
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