San José State University  
School/Department  
SOCI 102, Introduction to Statistics, 49044, Fall, 2016

Course and Contact Information

Instructor: Jose Bautista
Office Location: SH 333 F
Telephone: (408) (741-2492)
Email: jose.bautista@sjsu.edu
Office Hours: Monday 5:15 – 6:00 PM
Class Days/Time: Monday 6:00 – 8:45 PM
Classroom: HGH 217

Prerequisites: SOCI 1 (or equivalent)

Course Format
Although this is not an online course, there are a lot of materials available on my web site (www.imadhatter.com). In addition, weekly quizzes will also be posted online. If you do not have access to the internet let me know, and I will provide you with the materials.

Faculty Web Page and MYSJSU Messaging
Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my faculty web page at http://www.imadhatter.com. You are responsible for regularly checking the web site to learn of any updates.

Course Description
Introduction to measures of central tendency, variation, correlation and regression, probability, estimation and hypothesis testing.

Course Learning Outcomes (CLO)
Upon successful completion of this course, students will be able to:

1. Understand the different measurement scales, their uses and limitations.
2. Describe and interpret data through tables and graphs
3. Understand the meaning an usage of descriptive statistics including Mean, Median, Mode, Standard Deviation and Variance
4. Select the appropriate techniques to use given a particular set of data or research question.
5. Critically evaluate statistical results in the media, professional literature, and other areas of your life.

Course Learning Outcomes (CLO)
Upon successful completion of this course, students will be able to:
1. Describe data through tables and graphs
2. Calculate descriptive statistics including Proportion, Percentage, Mean, Median, Mode, Standard Deviation and Variance
3. Calculate inferential statistics including z-test, t-test, chi-square, correlation, and One-way ANOVA

Required Texts/Readings

Textbook
ESSENTIALS OF SOCIAL STATISTICS FOR A DIVERSE SOCIETY
Author: LEON-GUERRERO
ISBN: 9781483359496
Edition/Copyright: 2nd / 2015
Publisher: SAGE

Other Readings
None

Other technology requirements / equipment / material

- You will want to download and print worksheets from my website, so access to the web, a computer and a printer is recommended.
- Calculator (should be able to do square roots, and you should be comfortable using it). Calculators on cell phones, smart phones, tablets or computers are not allowed.
- Scantron (882) forms.

Course Requirements and Assignments
SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

Exams: Three exams. Lowest score is dropped. As a general rule, the examinations will take place during the last 2 hours of the class period in which they are scheduled. Each exam is worth 100 points.

Exam 1 (Chapters 1-4): 100 points
The Research Process (CLO 1)
Measurement Scales (CLO 1)
Frequency Distributions (CLO 1, 2)
Proportions and Percentages
Cumulative Distributions (CLO 2)
Rates (CLO 1, 2)
Pie Charts (CLO 1, 2)
Bar Graphs (CLO 1, 2)
Histograms (CLO 1, 2)
Line Graphs (CLO 1, 2)
The Mode (CLO 1, 3)
The Median (CLO 1, 3)
The Mean (CLO 1, 3)
The Shape of the Distributions (CLO 2)
The Range (CLO 1, 3)
The Interquartile Range (CLO 1, 3)
Variance (CLO 1, 3)
Standard Deviation (CLO 1, 3)

Exam 2 (Chapters 5, 6 & 8): 100 points
The Normal Distribution (CLO 1, 2)
Standard (Z) Scores (CLO 4)
The Standard Normal Distribution (CLO 4)
The Standard Normal Table (CLO 4)
Transforming Proportions (or Percentages) Into Z Scores (CLO 4)
The Concept of the Sampling Distribution (CLO 4)
The Sampling Distribution of the Mean (CLO 4)
The Central Limit Theorem (CLO 4)
Assumptions of Statistical Hypothesis Testing (CLO 4, 5)
Stating the Research and Null Hypotheses (CLO 4, 5)
Probability Values and Alpha (CLO 4, 5)
Hypothesis Testing (CLO 4, 5)
Errors in Hypothesis Testing (CLO 4, 5)
Z-tests (CLO 4, 5)

Exam 3 (Chapters 8-9): 100 points
T-test for one sample (CLO 4, 5)
T-test for independent samples (CLO 4, 5)
T-test for dependent samples (CLO 4, 5)
Bivariate Tables (CLO 2, 3, 4, 5)
Chi-Square (CLO 4, 5)

Quizzes: Eleven quizzes. Lowest score is dropped. These will be online, and you will have a week to do each of them. Each quiz is worth 20 points.

<table>
<thead>
<tr>
<th>Quiz</th>
<th>Chapter</th>
<th>Available at midnight on</th>
<th>Due by midnight on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz 1</td>
<td>Chapter 1</td>
<td>8/29</td>
<td>9/4</td>
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<tr>
<td>Quiz 2</td>
<td>Chapter 2</td>
<td>9/12</td>
<td>9/18</td>
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<td>Quiz 3</td>
<td>Chapter 3</td>
<td>9/19</td>
<td>9/25</td>
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<tr>
<td>Quiz 4</td>
<td>Chapter 4</td>
<td>9/26</td>
<td>10/2</td>
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<tr>
<td>Quiz 5</td>
<td>Chapter 5</td>
<td>10/3</td>
<td>10/9</td>
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<tr>
<td>Quiz 6</td>
<td>Chapter 6</td>
<td>10/10</td>
<td>10/16</td>
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<tr>
<td>Quiz 7</td>
<td>Chapter 8 (z-tests)</td>
<td>10/17</td>
<td>10/23</td>
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<tr>
<td>Quiz 8</td>
<td>Chapter 8 (t-tests)</td>
<td>10/24</td>
<td>10/30</td>
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<tr>
<td>Quiz 9</td>
<td>Chapter 9</td>
<td>10/31</td>
<td>11/6</td>
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<tr>
<td>Quiz 10</td>
<td>Chapter 10</td>
<td>11/7</td>
<td>11/13</td>
</tr>
<tr>
<td>Quiz 11</td>
<td>Chapter 11</td>
<td>11/14</td>
<td>11/20</td>
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Final Examination or Evaluation

Final Exam: About 50% comprehensive, and worth twice as much as the midterms. You will have the complete Final Examination period available to complete the final exam. Final exam is worth 200 points.
Final Exam (Chapters 10-11): 200 points
Topics covered in exams 1-3
One-way Analysis of Variance
Regression
Correlation
The Scatter Diagram
Linear Relationships and Prediction Rules

**Grading Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Points</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>3 Exams 100 pts/ea.</td>
<td>300</td>
<td>(33%)</td>
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<tr>
<td>Lowest Exam score</td>
<td></td>
<td>-100</td>
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<tr>
<td>11 Quizzes 20 pts./ea.</td>
<td>220</td>
<td>(33%)</td>
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<tr>
<td>Lowest Quiz score</td>
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<td>-20</td>
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<tr>
<td>Final Exam</td>
<td>200</td>
<td>(33%)</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td>600</td>
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**Determination of Grades**

90% (540 points) or above gets an A
80% (480 points) or above gets an B
70% (420 points) or above gets an C
60% (360 points) or above gets an D
< 60% (< 540 points) gets an F

Plus or minus (+/-) grades may be given at instructor’s discretion for borderline grades.

Extra credit opportunities are usually available as a part of the regular midterm exams.

**Classroom Protocol**

I am committed to your success in this course, but it is your responsibility to keep up with the readings and assignments, to ask questions in class or during office hours if you don’t understand the material, and to come to class fully prepared.

**University Policies**

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/*
Below is a rough schedule. For the official up-to-date course calendar check our website at www.imadhatter.com. The calendar is subject to change, so check www.imadhatter.com often. Changes will be noted on the “What’s New” section of our home page.

## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Assignments, Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/29</td>
<td>CHAPTER 1: The What and the Why of Statistics (Quiz 1)</td>
</tr>
<tr>
<td>2</td>
<td>9/5</td>
<td>Labor Day</td>
</tr>
<tr>
<td>3</td>
<td>9/12</td>
<td>CHAPTER 2: The Organization and Graphic Presentation of Data (Quiz 2)</td>
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<tr>
<td>4</td>
<td>9/19</td>
<td>CHAPTER 3: Measures of Central Tendency (Quiz 3)</td>
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<tr>
<td>5</td>
<td>9/26</td>
<td>CHAPTER 4: Measures of Variability (Quiz 4)</td>
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<tr>
<td>6</td>
<td>10/3</td>
<td>Exam 1</td>
</tr>
<tr>
<td>7</td>
<td>10/10</td>
<td>CHAPTER 5: The Normal Distribution (Quiz 5)</td>
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<tr>
<td>8</td>
<td>10/17</td>
<td>CHAPTER 6: Sampling and Sampling Distributions (Quiz 6)</td>
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<td>9</td>
<td>10/24</td>
<td>CHAPTER 8: Testing Hypotheses (Quiz 7)</td>
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<td>10</td>
<td>10/31</td>
<td>Exam 2</td>
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<td>11</td>
<td>11/7</td>
<td>CHAPTER 8: Testing Hypotheses (Quiz 8)</td>
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<tr>
<td>12</td>
<td>11/14</td>
<td>CHAPTER 9: Bivariate Tables (Quiz 9)</td>
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<tr>
<td>13</td>
<td>11/21</td>
<td>CHAPTER 10: Analysis of Variance</td>
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<tr>
<td>14</td>
<td>11/28</td>
<td>Exam 3</td>
</tr>
<tr>
<td>15</td>
<td>12/5</td>
<td>CHAPTER 10: Analysis of Variance (Quiz 10)</td>
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<tr>
<td>16</td>
<td>12/12</td>
<td>CHAPTER 11: Regression and Correlation (Quiz 11)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>12/19</td>
<td>Final Exam 5:15 – 7:30 PM (same room as class)</td>
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</tbody>
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