San José State University  
Department of Psychology  
Stat 095, Elementary Statistics, Fall 2011

Instructor: Jessica Stoltzfus Grady, M.S.  
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Office Hours: T TH 10:30 – 11:30am, 3 – 4 pm  
Class Days/Time: T TH 1:30 – 2:45 pm  
Classroom: SH 434  
Prerequisites: By California State University policy, passage of the Entry Level Math (ELM) Exam is a prerequisite to enroll in this course. Failure to satisfy this prerequisite will result in the retroactive assignment of a “U” grade in this course. Information on the ELM can be obtained on the web at http://testing.sjsu.edu/teptelm.html

GE/SJSU Studies Category: Intended for majors in education, nursing, personnel administration, psychology, social service and sociology, and psychology minors. GE: B4 (Mathematical Concepts) and CAN STAT 2.

Course Description

The major purpose of this course is to provide you with a solid foundation in elementary statistics, by introducing you to the various types of statistics used in psychology and other social sciences. In this course, you will learn the “what, when, and how” of statistics. That is, you will learn what statistics are available, when to use specific statistics, and how to interpret results.

Course Goals and Student Learning Objectives

1. Stat 95 requires students to write a minimum of 500 words in a manner appropriate to quantitative analysis. The writing requirement will be met via written projects. Writing will be assessed for grammar, clarity, conciseness, and coherence.

2. Stat 95 will incorporate issues of diversity in many ways (e.g., in lectures, assignments)

3. In terms of Mathematical Concepts (GE Area B4), Stat 95 will focus on:
   a) Basic mathematical techniques for solving quantitative problems
   b) Elementary numerical computation
   c) The organization, classification, and representation of quantitative data in various forms, such as tables, graphs, rates, percentages, measures of central tendency and spread
   d) Applications of mathematics to everyday life
   e) Applications of mathematical concepts in statistical inference
GE/SJSU Studies Learning Outcomes (LO)

Upon successful completion of this course, students will be able to:

LO 1. Use statistical methods to solve quantitative problems, including those presented in verbal form.

LO 2. Demonstrate the ability to use mathematics and statistics to solve real-life problems.

LO 3. Arrive at conclusions based on numerical and graphical data.

Assessment of Student Learning Objectives: The learning objectives will be assessed via homework assignments, exam questions, and written papers. These assessment items will involve solving verbal and symbolic quantitative problems, including those that involve real-world situations. Students will be required to arrive at conclusions using numerical and graphical data. For example, students may view a scatterplot depicting data for the amount of caffeine consumed (X) and the quality of sleep (Y) and will determine if a relationship exists between these variables, and, if so, the nature and strength of the relationships (LO 3). In addition, students will compute appropriate statistical measures that describe the relationship (LO 1) and then determine the practical implications of the observed relationship (LO 2, 3).

Required Textbook/Materials


Other required equipment and materials

1. Computer, printer, internet and library access
2. Scantron (No. 882-E) forms
3. Access to Statistical Package for the Social Sciences (SPSS) software (v. 13.0 or later). See “Student Technology Resources” below for additional information.
4. Calculator (must have the square root and exponential buttons)

Course webpage: Copies of the course materials such as the syllabus, major assignment handouts, etc. will be distributed through the course web site on Desire2Learn (D2L), SJSU’s learning management system. I recommend viewing some of the online tutorials if you’ve never before taken a course using D2L. Lecture materials will also be available on the course webpage.

Online tutorials: http://www.sjsu.edu/ecampus/students/D2L_students/index.htm

How to begin:

1. Visit the course Welcome page: https://sjsu.desire2learn.com/

2. Click the System Check link before you log in to make sure your system is configured properly. Note: Be sure that your browser pop-up blocker is disabled for D2L.
3. Log in to the system:

   a. **Username:** Your Desire2Learn username can be found by logging into your mySJSU account. Click on *Self Service → Campus Personal Information → Names*, and locate your Desire2Learn name (look for Name Type called D2L) from the list.

      Usernames will generally be in the form of firstname.lastname, but may have an appended number (e.g., firstname.lastname#) if there is more than one person with that name at SJSU.

   b. **Password:** Your initial Desire2Learn password is your 9-digit SJSU ID number. After your initial login, change your password to one that is meaningful and memorable to you.

   c. Problems? If you forget your password, use the “Forgot Password?” link in the “Login” box on the left side of the D2L login page.

      For other login or password issues, please contact the *Help Desk* at (408) 924-2377 or submit an “incident ticket” online at [http://www.sjsu.edu/helpdesk/ticket/](http://www.sjsu.edu/helpdesk/ticket/).

**Classroom Protocol and Environment**

**Classroom Protocol:** Classes will be comprised of lectures, in-class activities, and question-and-answer periods. Attendance is expected and is critical for success in this course. If you miss a class, you are responsible for getting the information covered. It is vital that you complete all scheduled readings and assignments before each class. **Always bring your text and calculator to class.**

To get the most out of the lectures, you should read the assigned material *prior* to the lecture (see Course Schedule). If you have not read the textbook, you may have difficulty following lectures. Furthermore, the textbook (at the end of each chapter) has exercises with which you can practice. In addition to homework assignments, you should work as many exercises as you can to make sure that you understand the concepts and computations. “Doing” really is “learning” when it comes to statistics. **The more you practice, the more it will make sense.** The material in the course is cumulative and it becomes more complex as the semester progresses. If you miss several lectures, it will become extremely difficult for you to catch up with class. Thus, it is very crucial that you attend all of the class periods.

**Classroom Environment:** In an effort to create a classroom environment conducive to learning, I require the following classroom etiquette:

- Be polite and respectful to the other people in the class.
- Do not talk when your instructor is speaking or when other students are asking questions.
- Do not work on any other course material during class, including studying for other exams.
- If you must arrive late or leave early, please do so quietly and with a minimum of distraction.
- Please turn off your cell phone, pagers, headphones, etc. before class. If you need to receive an emergency call, let me know about it in advance. Never take a call and start talking during class.
Electronics Policy: Do not use cell phones, foreign language dictionaries, laptop computers, headphones, or any other electronic device during Exams. Do not use electronic devices to check email, visit websites, play games, or send instant messages. Doing so is a distraction to other students and the instructor and will result in expulsion from class.

Assignments and Grading Policy

Your grade will result from the total number of points that you earn during the semester. Points will be assigned as follows:

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>How Many?</th>
<th>Points per Assessment</th>
<th>Total Points</th>
<th>Percent of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>4</td>
<td>50 each</td>
<td>200</td>
<td>~67%</td>
</tr>
<tr>
<td>Homework/Exercises</td>
<td>10</td>
<td>5 each</td>
<td>50</td>
<td>~16%</td>
</tr>
<tr>
<td>Writing Projects</td>
<td>2</td>
<td>25 each</td>
<td>50</td>
<td>~16%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>300</td>
<td>100%</td>
</tr>
</tbody>
</table>

A letter grade will be assigned based on a standard distribution of points. Your final grade will be calculated by summing your scores on the above criteria and a letter grade will be assigned based on the following grading distribution.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points Earned</th>
<th>Grade</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>294 – 300</td>
<td>C</td>
<td>219 – 233</td>
</tr>
<tr>
<td>A</td>
<td>279 – 293</td>
<td>C-</td>
<td>210 – 218</td>
</tr>
<tr>
<td>A-</td>
<td>270 – 278</td>
<td>D+</td>
<td>204 – 209</td>
</tr>
<tr>
<td>B+</td>
<td>264 – 269</td>
<td>D</td>
<td>189 – 203</td>
</tr>
<tr>
<td>B</td>
<td>249 – 263</td>
<td>D-</td>
<td>180 – 188</td>
</tr>
<tr>
<td>B-</td>
<td>240 – 248</td>
<td>F</td>
<td>&lt; 180</td>
</tr>
<tr>
<td>C+</td>
<td>234 – 239</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exams

There will be a total of four exams in this course. Exams may consist of multiple choice, short essay, and/or computational questions. Exam questions will be drawn from both the textbook and lectures.

You are required to bring the following to each exam:
- #2 pencil with an eraser
- Calculator (cell phones will NOT be allowed)
- An 882-E Scantron form

There will be no scheduled makeup exams. Make-up exams will only be given under special circumstances (e.g., written medical excuse, prior approval by the instructor, etc). If deemed necessary, a single make-up exam will be given at the instructor’s convenience and discretion. Any student that fails to contact the instructor by the next class meeting following the missed exam forfeits their eligibility to take a make-up exam.
Homework Assignments

Homework assignments will be due on Tuesdays (see Course Schedule). There will be a total of 10 homework assignments. The homework assignments are meant to help you practice the material covered in the textbook chapters and lectures. For example, Homework Assignment 1 will allow you to practice material covered in Chapter 1 of the textbook. The homework assignments will be available for download from the course web site, but will be handed-in at the beginning of class according to the Course Schedule below. Assignments are due at the start of class. Assignments submitted after this deadline will lose 10% immediately and an additional 10% for every weekday that they are late. Homework and exercises will not be accepted beyond seven calendar days from their due date unless other arrangements have been made with the instructor.

Writing Projects

While I am committed to teaching you how to calculate statistics, I am particularly interested in you developing the skills of interpreting and discussing the meaning of the statistics you have calculated, i.e., tell me what the numbers mean! To that end, the writing projects in this class will serve three specific functions:

1. Teach you how to communicate statistical findings and interpretations (Project 1).
2. Allow you to demonstrate your proficiency in written communication (Project 2).
3. Fulfill the GE requirement of writing a minimum of 500 words in a manner appropriate to quantitative analysis.

I will be discussing the details of these writing projects as their dates grow closer. Suffice to say that the reports will be at least 250-500 words in length (typed, double-spaced, 12-point font, 1” margins) and will include at least one graph or table (software generated). Correct grammar, punctuation, and statistical style (as described in the Publication Manual of the American Psychological Association, 6th ed.) are expected and will represent a portion of your grade on the assignment. All papers will be subject to plagiarism evaluation using Turnitin.com.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on add/drops is available at http://info.sjsu.edu/web-dbgen/narr/soc-fall/rec-324.html. Information about late drop is available at http://www.sjsu.edu/sac/advising/latedrops/policy/. Students should be aware of the current deadlines and penalties for adding and dropping classes.

University Policies

Academic Integrity

Students should know that the University’s Academic Integrity Policy is available at http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.pdf. Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University’s integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.
Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors.

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own. If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final work.

**Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

**Resources for Success**

**Student Technology Resources**

*SPSS Software:* You will find a brief introduction to SPSS in your textbook. You may also consult the Graduate Student Teaching Assistants in the Statistics Laboratory in DMH 350. Additionally, information on using SPSS is available online. There are several avenues for gaining access to the SPSS software:

1. The University Help Desk, located on the first floor of Clark Hall in room 102, sells install media for $15 for either Mac or Windows. You must provide a photo ID and a tower card at the time of purchase.
2. The Statistics Laboratory in DMH 350 during the posted office hours
3. SJSU Student Computer Service (SCS) provides eligible SJSU borrowers with laptop equipment and software for use inside the King Library (see [http://www.sjlibrary.org/services/computers/equipment.htm](http://www.sjlibrary.org/services/computers/equipment.htm) for more information).

**Learning Assistance Resource Center:** The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. The [LARC website](http://www.sjsu.edu/larc/) is located at [http://www.sjsu.edu/larc/](http://www.sjsu.edu/larc/).

**SJSU Writing Center:** The SJSU Writing Center is located in Room 126 in Clark Hall. Professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges staff the Center. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The [Writing Center website](http://www.sjsu.edu/writingcenter/) is located at [http://www.sjsu.edu/writingcenter/](http://www.sjsu.edu/writingcenter/).

This syllabus was derived based on material by Drs. Laraway and Rodgers.
## Course Schedule

<table>
<thead>
<tr>
<th>Week; Date</th>
<th>Statistical Concepts</th>
<th>Readings</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 8/25</td>
<td>Course Overview, Introduction to Statistics</td>
<td>Ch. 1</td>
<td></td>
</tr>
<tr>
<td>2 8/30 9/1</td>
<td>Intro. to Statistics  Frequency Distributions</td>
<td>Ch. 1, 2</td>
<td></td>
</tr>
<tr>
<td>3 9/6 9/8*</td>
<td>Frequency Distributions, cont.  *Class Recess</td>
<td>Ch. 2</td>
<td>HW1</td>
</tr>
<tr>
<td>4 9/13 9/15</td>
<td>Central Tendency  Central Tendency, cont.</td>
<td>Ch. 3</td>
<td>HW2</td>
</tr>
<tr>
<td>5 9/20 9/22</td>
<td>Variability  Variability, cont.</td>
<td>Ch. 4</td>
<td>HW3</td>
</tr>
<tr>
<td>6 9/27 9/29</td>
<td>Exam 1 (Ch. 1-4)  z Scores</td>
<td>Ch. 5</td>
<td>HW4</td>
</tr>
<tr>
<td>7 10/4 10/6</td>
<td>z Scores, cont.  Probability</td>
<td>Ch. 5, 6</td>
<td>HW5</td>
</tr>
<tr>
<td>8 10/11 10/13</td>
<td>Probability, cont.  Probability and Samples</td>
<td>Ch. 6, 7</td>
<td>HW6</td>
</tr>
<tr>
<td>9 10/18 10/20</td>
<td>Probability and Samples, cont.  Hypothesis Testing</td>
<td>Ch. 7, 8</td>
<td>HW7</td>
</tr>
<tr>
<td>10 10/25 10/27</td>
<td>Hypothesis Testing, cont.  Exam 2 (Ch. 5-8)</td>
<td>Ch. 8</td>
<td>HW8</td>
</tr>
<tr>
<td>11 11/1 11/3</td>
<td>The t Statistic  The t Statistic, cont.</td>
<td>Ch. 9</td>
<td></td>
</tr>
<tr>
<td>12 11/8 11/10</td>
<td>t Statistic for Independent Samples  t Statistic for Related Samples</td>
<td>Ch. 10, 11</td>
<td>Writing Project 1</td>
</tr>
<tr>
<td>13 11/15 11/17</td>
<td>Exam 3 (Ch. 9-11)  Analysis of Variance</td>
<td>Ch. 13</td>
<td>HW9</td>
</tr>
<tr>
<td>14 11/22 11/24*</td>
<td>Analysis of Variance, cont.  *Class Recess (Thanksgiving holiday)</td>
<td>Ch. 13</td>
<td></td>
</tr>
<tr>
<td>15 11/29 12/1</td>
<td>Analysis of Variance, cont.  Correlation and Regression</td>
<td>Ch. 13, 15</td>
<td>HW10</td>
</tr>
<tr>
<td>16 12/6 12/8</td>
<td>Correlation and Regression  Correlation and Regression</td>
<td>Ch. 15</td>
<td>Writing Project 2</td>
</tr>
</tbody>
</table>

**Note on the schedule:** This course will follow this schedule to the extent possible. The timing and specific nature of topics may change. Any changes will be announced in class as far in advance as possible. You are responsible for being informed of any changes made to the class schedule.