

SAN JOSÉ STATE UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
STATISTICS 095: ELEMENTARY STATISTICS
SECTION 01/61
WINTER 2023
ONLINE COURSE (**ASYNCHRONOUS**)

Course and Contact Information

Instructor	Nicholas G. Bathurst
Office Location	DMH 230
Telephone	Zoom (schedule via email)
Email	nicholas.bathurst@sjsu.edu
Office Hours	In-person meetings can be scheduled if students need additional support.
Class Days/Time	Online Asynchronous (no in person meetings)
Classroom	Online Asynchronous (no classroom)
Prerequisites	Satisfaction of the Math Enrollment Category M-I or M-II, or completion of a GE Area B4 Course with a grade of C- or Better.
GE/SJSU Studies	Area B4 (Mathematical Concepts) Intended for Psychology majors and minors as well as for programs in Behavioral Science, Child Development, Education, Health Science, Nursing, Nutritional Science, Social Science, and Social Work. See Fall 2014 GE Guidelines for a full description of Area B4 goals and requirements

Course Description

Social scientists (psychologists, sociologists, etc.) ask interesting questions about human behavior. Chances are that in each of your social science classes, there was at least one study or finding that you found fascinating and that has stuck with you. But how did social scientists come to this knowledge; how did they develop these insights into human nature?

One important tool of many social scientists is statistical analyses. The overall goal of this course is for you to become “quantitatively literate.” Quantitative literacy in this case refers to an understanding of *why* statistics are important tools for studying behavior, *how* and *when* to apply specific techniques to a particular question or problem, and the ability to interpret statistical information and results. Learning the conceptual underpinnings and computational procedures for various statistical techniques is vital to this course. You will also be introduced to software that allows you to do basic and sophisticated statistical analyses on large datasets.

Topics to be covered include hypothesis testing and predictive techniques to facilitate decision-making; organization and classification of data; descriptive and inferential statistics; central tendency, variability, probability and sampling distributions; graphic representation; correlation and regression; chi-square, t-tests, and analysis of variance; computer use in analysis and interpretation.

First Actions for this Course

This course is conducted entirely online, therefore it is very important that you become familiar with the online resources and tools right away. Please do the following on the first day of class.

1. Review this syllabus
2. Log into Canvas and click on this course
 - a. go to <http://my.sjsu.edu/> and click on the Canvas app.
 - b. Username = *SJSU 9-digit ID*
 - c. Password = *your current MySJSU password*
3. From the dashboard, click on the appropriate class (SP20: Stat-95 Sec 80)
4. Alongside the left-hand menu bar, click on **announcements** to see any new information I have left for students
5. Click on **Piazza** discussion board and register.
6. Click on **modules** and explore
7. Begin participating in the course by clicking on the **Module: Engagement Day** and working your way through the assignments.
8. Begin work on **Module 1: Introduction to Statistics & Scientific Studies**
9. Try out the different video types. There are two types of video presentations:
 - a. **Udacity videos.** The main videos for this class are the Udacity videos. These are short videos (usually 1 to 3 minutes long) that present 1 to 2 ideas followed by mini-quiz (does not affect your grade). These videos cover all the class topics.

- b. **“traditional lecture” videos.** These are longer videos that follow the format of standard in-class lectures. I have provided these to supplement the Udacity videos. Some students may find this type of material more useful. Most, but not all, class topics are covered by these types of videos.
10. Post questions or issues about the course on **Piazza**.
 11. **This is a quasi-self-paced course.** You can work ahead on assignments that lead up to an exam. The exams are held on a specific date, and you can begin them within the time range indicated in Canvas. Once begun, they must be finished within 1 hour and 30 minutes.

Course Format: Online

In my view, regardless of whether a course is conducted in a traditional face-to-face format, exclusively online, or anything in between, the essential learning experience for students is composed of roughly three parts: *information delivery*, *interaction*, and *evaluation*. Regardless of instructional mode, the goal is to provide students with the opportunity to meet the course learning objectives (evaluation) through a variety of information delivery and interaction techniques.

This is an **online** course, which in this case means:

Information delivery will be through viewing online video segments that describe and demonstrate statistical concepts and computations. There will be a set of primary videos accessed through Canvas for each concept covered, as well as supplemental materials (e.g., additional YouTube videos) should you require additional explanation. Office hours and the Piazza discussion board may also be means of information delivery.

Interaction activities will be completed online. **Interaction partners** will include activities done on your own, as well consultation and feedback from your instructor. Office hours and the Canvas discussion board may also be means of information delivery.

Online interaction activities will primarily consist of viewing video segments that describe and demonstrate statistical concepts and computations, and completion of online assignments and exams.

Exams will be administered online using Respondus Lockdown Browser and other features to eliminate proctoring costs and minimize cheating opportunities.

Please see course assignments and schedule for in-class meetings and assignment type details.

Evaluation and Feedback will be provided through online means.

Enhancing Success in an Online Course

Because this is an online course, there is an increased responsibility on the part of the student to:

- **be diligent and conscientious in keeping up with course assignments.** It is easy to “put off” an online course when there are no specific obligations to attend class.
 - [Appendix A](#) of this syllabus contains tips for how to succeed in this online course and resources such as SJSU statistics tutors.

- **communicate with the instructor in a very timely manner whenever there are problems or issues.** Because we do not meet face-to-face, the only way for me to know if there are any glitches in the course is if students tell me.
 - [Appendix B](#) contains screenshots for using Piazza, the discussion board (accessed through Canvas) which you will use to post any questions about the course and assignments.

- **become familiar and comfortable with the online interface (Canvas) and resources for the course.** If you have any problems, please contact me as soon as possible so that they can be resolved.
 - See syllabus for Canvas access instructions.
 - [Appendix C](#) contains screenshots and specific instructions for utilizing the Canvas site. When first accessing the site, you should check out the
 - **announcements** link for any new information about the course
 - **modules** link, which is your primary guide through the course. It contains each learning module for the course (videos, lecture notes, problem sets, etc.), as well as links to the exams on days that they are due.
 - [Appendix D](#) contains screenshots and specific instructions for utilizing the Udacity video segments (accessed through Canvas) which will be the chief means of instruction.
 - **Canvas Student Tutorial:** <http://www.sjsu.edu/at/ec/canvas/>

Learning Outcomes

Overview

Learning Outcomes (LOs) are specific, measurable goals and objectives that students have demonstrated upon successful completion of the course. **GE/SJSU Course Learning Outcomes (GELOs)** are course outcomes mandated by General Education and can be found, along with additional required course content, in the [Fall 2014 GE Guidelines](http://www.sjsu.edu/senate/docs/2014geguidelines.pdf), which can be found here: <http://www.sjsu.edu/senate/docs/2014geguidelines.pdf>. There are two levels of learning outcomes being addressed in this course:

GE/SJSU Course Learning Outcomes (GELOs). These are outcomes mandated by General Education and can be found, along with additional required course content, in the [Fall 2014 GE Guidelines](http://www.sjsu.edu/senate/docs/2014geguidelines.pdf).

[Program Learning Outcomes \(PLOs\)](http://www.sjsu.edu/senate/docs/2014geguidelines.pdf). These outcomes refer to the broad goals of the SJSU Psychology Major program. The SJSU Psychology Major is designed to address 5 broad PLOs. These PLOs are outcomes students should be able to demonstrate after having successfully completed the Psychology Major.

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

- GELO 1. To use statistical methods to solve quantitative problems, including those presented in verbal form, satisfied by the following major assignments
- GELO 2. To demonstrate the ability to use mathematics and statistics to solve real-life problems, satisfied by the following major assignments
- GELO 3. To arrive at conclusions based on numerical and graphical data, satisfied by the following major assignments
- GELO 4. To use basic mathematical techniques for solving quantitative problems and elementary numerical calculation (Specific to Area B4)
- GELO 5. To understand organization, classification, and representation of quantitative data in various forms (e.g., tables, graphs, percentages, measures of central tendency, and spread) (Specific to Area B4)
- GELO 6. To apply mathematics to everyday life (Specific to Area B4)
- GELO 7. To apply mathematical concepts to statistical inference (Specific to Area B4)

Additional GE/SJSU Content Requirements

- **Completing Area B4 with a grade of C or better (C-not accepted) is a graduation requirement.**
- **Diversity.** Issues of diversity shall be incorporated in an appropriate manner.
- **Writing.** The minimum writing requirement is 500 words in a language and style appropriate to quantitative analysis, which will be met by a project described later in

the syllabus. Writing shall be assessed for grammar, clarity, conciseness and coherence.

Program Learning Outcomes (PLOs)

Upon successful completion of the psychology major requirements...

PLO1 – Knowledge Base of Psychology – Students will be able to identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

PLO2 – Research Methods in Psychology – Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.

PLO3 – Critical Thinking Skills in Psychology – Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.

PLO4 – Application of Psychology – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

PLO5 – Values in Psychology – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Required Texts, Readings

No Required Textbook

There is no required textbook for this course. All concepts, formulas, and computational tutorials can be found through the resources provided in the course's Canvas shell. However, there are a variety of free online resources that can supplement the course content. For example:

- <http://cnx.org/content/col10522/latest/>
- <http://davidmlane.com/hyperstat/index.html>
- www.openintro.org/stat/textbook.php
- <http://www.statsoft.com/textbook/>
- <http://vassarstats.net/textbook/>
- <http://wiki.stat.ucla.edu/socr/index.php/EBook>

Required equipment/material requirements

- **Regular and reliable access to a computer and internet connection** that can support typical multimedia applications (e.g., streaming audio/video). This is essential for an online class. Unless the entire university network of Learning Management System is down, technological issues cannot be used as an excuse for not turning in work on time. So, plan ahead and do have a backup plan should you experience issues with your

primary computer. SJSU provides a lot of computer support for students should you be having issues with your primary computer, including:

- [Academic Technology Computer Center](#)
- [Information Technology Support Services \(ITSS\)](#)
- [Library Student Computing Services Center](#)
- **Calculator.** Calculators should be handheld and must have the square root and exponent buttons. Graphing calculators are not necessary (but you may use one if you like). For exams, you will need to use a calculator. You will not be allowed to use your cell phone, computer apps, or the internet.
- **Spreadsheet app** such as Excel, Numbers, or Google Docs.
- **Notebook paper, pencils.** Do computations for assignments “long hand” (on paper) so that you can be sure you have completed each step and can check your work should you get the incorrect answer. Expect to make mistakes, so use a pencil when working through problems.

Course Structure

Modules

This course is divided into **Modules** which cover specific statistical concepts, formulas, and computational steps. To complete each module you will:

- **Lecture Videos.** These videos were developed by Drs. Sean Laraway and Ronald Rogers in a partnership with a private company called [Udacity](#). Please note that:
 - You do NOT need to subscribe to Udacity’s services use these videos. They can be accessed directly through Canvas.
 - Some students may find it easier and more engaging to watch the lecture videos directly through Udacity; below is the link to the original course: <https://www.udacity.com/course/statistics--st095>
 - The person delivering the information in the Udacity videos is Katie Kormanik; This is NOT your instructor. She is a Udacity employee who recorded the materials developed by Drs. Laraway and Rogers.
 - **Appendix D of this syllabus contains screenshots and specific instructions for utilizing the video segments.**
- **“Answer the Question.”** Most lecture videos end with a conceptual question or problem to solve. Below the video there is a link to “Answer the question;” simply **shift + left click** the link to open the question into a separate tab. These questions do not count towards your grade and are only used for practice and to assess your knowledge of the content.
- **Problem Sets** (see Assignments section for additional details).
- **Quizzes** (see Assignments section for additional details).
- **Exams** (see Assignments section for additional details).

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, and completing assignments.. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Assessment in this class will include

Assessment Item	Items	Points	% of Final Grade (approximately)
Exams	3 x 175 pts	525	70
Quizzes	15 x 10 pts	150	20
Problem Sets	15 x 2 pts	30	4
Analysis & Interpretation Project	1 x 25pts	25	3
Engagement Day	6 Assignments	20	3
Total		750	100%

Final grades in this course will be assigned as indicated below:

A+ = 97.0 to 100%	A = 93.0 to 96.9%	A- = 90.0 to 92.9%
B+ = 87.0 to 89.9%	B = 83.0 to 86.9%	B- = 80.0 to 82.9%
C+ = 77.0 to 79.9%	C = 73.0 to 76.9%	C- = 70.0 to 72.9%
D+ = 67.0 to 69.9%	D = 63.0 to 66.9%	D- = 60.0 to 62.9%
F = 59.9% or less Unsatisfactory		

According to SJSU GE policy, this course must be passed with a C- or better as a CSU graduation requirement.

Engagement Day (20 points). The first day of class is dedicated to make sure you're ready for online education, and if so, that you are also ready to meet the challenges, responsibilities, and expectations of this class in particular. This day will involve seven activities; each designed to get you ready to succeed in our class and help us improve the class. More information will be provided on our Canvas site.

Problem Sets (30 points). Each module (or “lesson”) has a Problem Set associated with it. At the end of each lesson, you should complete the Problem Set to test your knowledge of the material and to practice for the exams.

- **Self-assessment in preparation for the exam.** These problem sets are meant to help you self-assess your knowledge of the concepts covered in each module. If you have any questions about problems, post them to Piazza (discussion board).
- **Credit/No Credit.** All problem sets will be multiple-choice or short answer and are graded on a credit/no credit basis. You will receive full credit no matter how well you do on the problem set. It’s encouraged to redo the problem sets until you answer each question correctly.
- **You may use any support materials** (online textbooks, videos, notes, calculator, spreadsheet apps) when completing the problem set.

Quizzes (150 points). Each 20-minute quiz ~10 questions and is worth 10 points. Quizzes will be assigned in Canvas.

- **You may use any support materials** (textbook, videos, notes, calculator, spreadsheet apps) when taking your quiz.
- **All work should be your own.** You may not communicate with any other person (except for your instructor) while you complete the quiz. Getting help from someone else and/or sharing answers with classmates will be considered **academic dishonesty** and will subject you to the sanctions described in the section below titled “Academic Integrity.”
- **You may take each quiz twice.** You will earn the higher of the two scores.
- **You may complete the quiz at any time before the due date.** Missed quizzes cannot be made up.

Exams (525 points). There are 3 exams for this course. The exams are meant to assess your knowledge of the statistical concepts and calculations we cover in class.

- **Content.** Exams consist of ~30 multiple choice and computational questions and are worth 175 points each.
- **Administration.** Each Exam is available online during a specific window of time (6 a.m. to 11:59 p.m.) on the dates scheduled below using Canvas and the Respondus Lockdown feature. Each exam is 90 minutes in duration. You may not pause the exam once you begin, so be prepared to complete it in a single sitting at the schedule time.
- **You may use limited support materials** (personal handwritten or typed notes, PowerPoint lecture slides, formula sheet, and a calculator) while taking an exam. **You cannot use statistics textbooks (online/eBook or hardcopy) while taking the exam.** Using the internet or any other statistical programs/apps/devices to figure out the answers or topics related to the exam is prohibited and considered cheating.
- **All work should be your own.** You may not communicate with any other person (except for your instructor) while you complete the exam. Getting help from someone else

and/or sharing answers with classmates will be considered **academic dishonesty** and will subject you to the sanctions described in the section below titled “Academic Integrity.”

- **Emergencies/Extenuating Circumstances.** No extensions or make-up exams will be given except in cases of reasonable and documented academic reasons, emergencies, serious illness, or similar seriously disruptive events. ***If such a circumstance should arise, you must***
 - notify me before the end of the exam period (i.e., by 10 p.m. on the exam day).
 - provide written documentation for the reason you could not take the exam. At my discretion, I may allow you to make up the exam, but this is not guaranteed.

Analysis and Interpretation Project (25 points). This project will involve applying the skills you learn in this class to the analysis and interpretation of a dataset. You will be provided with a research hypothesis and dataset that tests the hypothesis. After analyzing the data, you will write a brief report (approximately 500 words) of your statistical analysis, a graphical depiction of the data, and a conclusion as to whether the data support the hypothesis. More details are provided in Canvas.

Late Assignments

Assignments are due as indicated in Canvas. ***No extensions will be given except in cases of reasonable and documented academic reasons, emergencies, serious illness, or similar seriously disruptive events. If such a circumstance should arise, please contact me as early as possible and be ready to provide documentation.***

Extra Credit

There are multiple extra credit opportunities in my course. Pay attention to the Piazza Discussion Board for extra credit announcements.

University Policies (Required)

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](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Classroom Protocol: Contacting Instructor

Contacting Instructor

1. **I always try to answer emails with in 24hrs; most of the time sooner.** If you email me at night or on the weekends, do not expect a response until the next weekday, at the earliest.
2. **Through SJSU email.** nicolas.bathurst@sjsu.edu; best for private questions or concerns.
 - a. You may also email me through Canvas if you find it easier.
3. **Through Canvas discussion board (Piazza).** Best for questions about the course that need not remain private. Chances are others have the same questions you have.
4. **By phone.** Always email me first to set up an appointment by phone.
5. **Consider emails for this course as professional correspondence (see sample correspondence below).**
 - a. **Subject Line** should include your class and a brief description of the issue (e.g., Subject: Stat95-80: Trouble accessing video in Canvas).
 - b. **Greetings** All emails should begin with a greeting (e.g., Dear Nick, or Hi/hello Nick,). Please feel free to refer to me as Professor Nick, Nick, or Nicholas...I do not care!
 - c. **Identify yourself** and the course/section you are in.
 - d. **Issue or question** should be stated clearly, concisely, respectfully, and with attention paid to grammar, complete sentences, and so forth.
 - e. **Expect replies within 1 - 2 days.** Polite follow-ups are encouraged if you have not heard from me in a reasonable amount of time. I receive a lot of emails, so changes are I have lost or forgot to reply to your email. Please ping me as necessary, I understand your urgency as a student with multiple classes and obligations!

Example email correspondence

Subject: Stat95-80: Assignment due date question

Hi Nick,

My name is Miranda Jackson and I am in your Online Stat95 class. I am not sure when the Response Journal assignment is due because of conflicting information. The syllabus schedule says May. 5, but the assignment sheet itself says May 9. Thank you for your attention to this matter.

Best,
Miranda
student id # 001234567

Statistics 095 Online Course Schedule*

Day	Due Date	Topics, Readings, Assignments
1 – Tuesday	01/03	Engagement Day activities (6 assignments)
2 – Wednesday	01/04	Module 1: Introduction to Statistics & Scientific Studies Module 2: Frequency Distributions & Visualizing Data
3 – Thursday	01/05	Module 3: Central Tendency Module 4: Variability
4 – Friday	01/06	Exam 1 (Modules 1 – 4) **
5 – Monday	01/09	Module 5: Standardized Scores (z-scores) Module 6: The Normal Distribution
6 – Tuesday	01/10	Module 7: The Sampling Distribution of the Mean Module 8: Estimation (Confidence Intervals)
7 – Wednesday	01/11	Module 9: Hypothesis Testing
8 – Thursday	01/12	Exam 2 (Modules 5 – 9) **
9 – Friday	01/13	Module 10: Using <i>t</i> Tests to Compare Means
10 – Monday	01/14	<i>Martin Luther King Day – No Class</i> <i>If available, use this time to start Module 11.</i>
11 – Tuesday	01/17	Module 11: Using <i>t</i> Tests to Compare Means, continued Analysis and Interpretation Project Posttest
12 – Wednesday	01/18	Module 12: One-Way ANOVA and Post-hoc Tests
13 – Thursday	01/19	Module 13: One-Way ANOVA and Post-hoc Tests, continued
15 – Friday Final Exam	01/21	Exam 3 (Modules 10-13) ** Extra Credit: Module 14/15 & GE Post-Test

* This is a tentative timeline. The schedule is subject to change with fair notice. Students will be notified of schedule changes via email and/or Canvas.

**Due date pertains to when the module's problem set and quiz is due. Quizzes will not be available after the due date has passed. Problem sets can be taken as many times as you want before and after the due date.

** Exams are available from 6am to 11:59 pm, BUT once you begin, you have 1 hour and 30 minutes to complete the exam.

Student Resources

Librarian: Psychology

The SJSU library has a librarian who specializes in psychology (and other social sciences), and this librarian can serve as a very valuable resource for helping you to develop research ideas and locating appropriate research materials. The library also has an abundance of resources for doing psychology research:

Psychology Librarian: Christa Bailey
408-808-2422
christa.bailey@sjsu.edu
<http://libguides.sjsu.edu/psychology>

Student Technology Resources

Computer labs for student use are available in the [Academic Success Center](http://www.sjsu.edu/at/asc/) at <http://www.sjsu.edu/at/asc/> located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library.

A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include digital and VHS camcorders, VHS and Beta video players, 16 mm, slide, overhead, DVD, CD, and audiotape players, sound systems, wireless microphones, projection screens and monitors.

ACCESS Success Center

The [ACCESS Success Center](http://www.sjsu.edu/access/) is a resource for College of Social Sciences students, which includes psychology majors. This center provides mentoring, tutoring, and advising especially geared for social science majors. The center provides workshops and presentations on writing, statistics, graduate school applications, and so forth. Visit their webpage for more information, <http://www.sjsu.edu/access/>

SJSU Peer Connections

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving

your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit [Peer Connections website](http://peerconnections.sjsu.edu) at <http://peerconnections.sjsu.edu> for more information.

SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the [Writing Center website](http://www.sjsu.edu/writingcenter) at <http://www.sjsu.edu/writingcenter>. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)



SJSU Counseling Services

The SJSU Counseling Services is located in the Student Health Center, Room 300B. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit [Counseling Services website](http://www.sjsu.edu/counseling) at <http://www.sjsu.edu/counseling>.

Appendix A

How to succeed in online Stat 95

- **Make your course planning schedule and stick to it.** After initial data collection, revise schedule if needed. Watch the videos well before quizzes and exams are due so that you have time to re-watch topics that you are having difficulty understanding.
- **Ask questions!** Use the “Piazza” link on Canvas to ask questions regarding course content or assignments. Use online office hours to interact with your instructor. Students are also encouraged to answer other students’ questions when they know the answer, as well as “like” answers provided by other students.
- **Read any assigned material carefully before due dates.**
- **Take notes while watching the videos.**
- **Make flash cards.** Making flash cards with definitions of concepts, formulas, or terms shown in videos, terms in the lecture notes/postings, etc. is helpful when learning new information. Shuffle the cards and read the term while trying to remember the definition, next check for accuracy. Next, shuffle again and read the definition while trying to remember the term, next check for accuracy.
- **Check the Canvas website daily** as this is your only contact with the instructor. Canvas allows you to view the syllabus, quizzes, assignments, writing projects, and class schedule. You will also be able to access your grades via this website.
- **Begin studying early for exams** (i.e., do not wait until the day before the exam to start studying). When you study, scramble the order in which you study the term and concepts. Research shows that this technique is superior to others.
- **Keep track of your grade.** It is good practice to know what your current grade is in the class.
- **Start the writing assignments early** to be sure you have sufficient time to proofread and make corrections.
- **Seek tutoring.** If you are the type of student who likes face-to-face meetings and need additional help, there are tutoring resources on campus.
 - At SJSU, tutoring resources available to you are
 - Office hour appointments with the instructor.
 - **Psychology Statistics Lab.** Computers and tutoring are available in DMH 350. Schedule information to be posted on Canvas.
 - [Peer Connections](#). Visit their website for more information.
 - [CASA Student Success Center](#). Visit their website for more information.
 - [ACCESS Success Center \(CL 240\)](#). Visit their website for more information.
 - [Student Technology Training Center](#). Visit their website for more information.

Appendix B
Canvas Screenshots

Canvas Main Screen

SJSU Summer 2018

SU18: STAT-95 Sec 80 - Elem Stat

Welcome to Statistics 95 Online!

data **statistics** **quantitative** **statistical** **models** **inference** **analysis** **deviation** **research** **coefficient** **regression** **learning** **computing** **generational** **linear** **probability** **modeling** **maximum** **expectation** **likelihood** **trend** **spatial** **visualization** **methods** **workshops** **consulting** **series** **covariate** **duration** **causal** **equation** **workbooks** **graphical** **standards** **parameter** **function** **normal** **predictive** **distribution** **variance** **statistic**

Course Instructor
Dr. Clifton Oyamot

Udacity Video and Course Designers

Many thanks to Dr. Sean Laraway, who designed this online course and its content. Dr. Laraway has allowed me to use and modify his content for my course.

Udacity Videos

The main videos used in this course were designed by Drs. Sean Laraway and Ronald Rogers in a partnership with a private company called [Udacity](#). Subscription to Udacity is NOT required to view these videos while taking this course.

Account
Dashboard
Modules
Piazza
Announcements
Syllabus
Assignments
Grades
Pages
People
Writer's Help
Portfolio
SOTE/SOLATE

Piazza is the main discussion board and office hour "meeting place"

Piazza Discussion Board: Questions, Answers, and Office Hours

The screenshot shows a web browser window displaying a Canvas LMS Piazza discussion board. The browser's address bar shows the URL https://sjsu.instructure.com/courses/1115655/external_tools/18326. The page header includes the SJSU logo and navigation links for Courses, Assignments, Grades, and Calendar. The course information is FA14: STAT-95 Sec 05 - Elem Stat, Fall 2014. The Piazza interface includes a search bar, a 'New Post' button, and a list of posts. The current post is a note titled 'Welcome to Piazza!' from Dr. Laraway, dated 8/16/14. The note text reads: 'Students, Welcome to Piazza! We'll be conducting all class-related discussion here this term. The quicker you begin asking questions on Piazza (rather than via email), the quicker you'll benefit from the collective knowledge of your classmates and instructors. We encourage you to ask questions when you're struggling to understand a concept—you can even do so anonymously.' Below the note is a 'followup discussions' section with a text input field for 'Compose a new followup discussion'.

Appendix C

Canvas site (modules focus)

FA15: STAT-95 Sec 03 - Elem Stat > Modules

Fall 2015

- Home
- Announcements
- Modules
- Piazza
- Assignments
- Grades 2
- Pages
- Writer's Help
- +WebEx

▶ Course Resources

▶ Engagement Week Complete All Items

▼ Introduction to Statistics & Visualizing Data Complete All Items -

📄 Get excited about Statistics!	View	<input type="radio"/>
📄 Lesson 1, Part 1: Intro to statistical research methods, part 1 (...)	View	<input type="radio"/>
📄 Lesson 1, Part 2: Intro to statistical research methods, part 2 (...)	View	<input type="radio"/>
📎 Lecture Notes for Lessons 1-4		
📄 Optional: Alternative Lesson 1-2 Videos		
📄 Self-adapted Practice Quiz 1 part A and B	Sep 4, 2015	0 pts
📄 Quiz 1: Introduction to statistical research methods	Sep 4, 2015	10 pts
📄 Lesson 2, Part 1: Visualizing data, part 1 (13 videos, ~ 4 min)-2	Viewed	<input checked="" type="checkbox"/>
📄 Lesson 2, Part 2: Visualizing data, part 2 (14 videos, ~6 min)-2	View	<input type="radio"/>
📄 Self-adapted Practice Quiz 2 part A and B	Sep 4, 2015	0 pts
📄 Quiz 2: Visualizing Data	Sep 4, 2015	10 pts -
📄 Problem Set 1	Sep 5, 2015	1 pts -
📄 Problem Set 2	Sep 11, 2015	1 pts

▶ Describing the Center and Spread of Distributions Complete All Items

The **modules** link in Canvas is your primary guide through the course. It contains each learning module for the course as well as links to the exams on days that they are due.

The module above contains your first major lessons in statistics and visualizing data. In general, each module will contain, in order:

- Video instructions about major concepts and formulas
- Lecture notes formulas are included
- Additional instructional videos if you would like more explanation about concepts
- Quizzes and problems sets, along with their due dates and how many points they are worth.

Appendix D
Udacity Video Clip Structure

Structure of a video clip

