PSYCH 2: Statistical Methods for Psychology and Social Science

Syllabus Contents

Section Information

Section number, days, times, & room information

Section: **12267**

Room: **Budd 408**

Tuesday & Thursday

7:30am – 8:50am

Fall 2019

SAN JOAQUIN DELTA COLLEGE

Instructor

Contact Information

Dr. Gibson, LMFT

email: gwgibson@deltacollege.edu

(When sending an email, begin the subject line with "Psych 2".)

Office: Holt 421
209-954-5274

Office Hours:
available for students:
10:30 AM – 11:30 AM
Monday through Friday
or by appointment.

Catalog Description

Description of the course

Prerequisites: MATH 92G Intermediate Algebra or MATH 92S Intermediate Algebra (STEM) each with a grade of `C` or better or qualifying placement. Limitations on Enrollment: None. Advisories: PSYCH 1 with a grade of `C` or better.

An introduction to the basic statistical methods and analyses commonly used in sociological research. Topics include: descriptive and inferential statistics usually include levels and types of measurement; measures of central tendency and dispersion; normal, t, and chi-square distributions; probability and hypothesis testing; correlation and regression. Applications of statistical software to sociology and/or other social science data required. (UC, CSU, C-ID SOCI 125)

Course Learning Outcomes

Expected Learning Results

The student will demonstrate the "real life" use of various inferential statistics (i.e., correlation, t-test, Chi-square, and analysis of variance) by conducting research projects. The student will demonstrate their knowledge of the interpretation of various statistical analyses on test questions related to the interpretation of statistical analyses. Test items may consist of true-false questions, multiple-choice questions, fill-in-the blank questions, and situation/example questions.

Course Objectives

Delta College Goals for the Course

1. Solve problems related to measures of central tendency and measures of variability.
2. Analyze and evaluate probabilities for defined events.
3. Compare and contrast situations using the binomial, normal, student-t, Chi-square, and F distributions.
4. Analyze statistical decision-making situations to determine which of the following tests might be used: Z, t, Pearson r, Chi-square, Mann-Whitney, analysis of variance, or rank-order correlation.
5. Interpret results obtained from various statistical analyses.

Dr. Gibson's Goals for the Course

1. Develop the ***parts of the brain*** used for math, critical analysis, and problem solving.
2. Develop the ***skills*** to interpret the news, and to make decisions in school, work, and life.
3. Develop ***confidence*** through achievement!

Key Dates

Withdraw Dates for Fall 2019

Last date to drop for a refund: **9/9/2019**.

Last date to drop without a "W": **9/15/2019**.

Last date to drop with a "W": **10/22/2019**.

Textbook, Calculator, Scantrons

Required & Recommended Course Resources

Open Source Textbook: Diez, D., Çetinkaya-Rundel, M., Barr, C. D. (2019). OpenIntro Statistics (4th ed.). *A Free PDF can be downloaded from openintro.org/os.*

Calculator: A standard calculator with a square root button is strongly recommended. Phones, tablets, watches, computers, etc., are **not** allowed during tests.

Scantrons: You will need six 100-question scantrons – one for five exams and one final.

Attendance

Attendance Requirement

Attendance is required. To be counted present, you must be present and must respond as instructed **at the time that attendance is taken**. The college attendance policy will be enforced. If you decide to drop the course, it is your responsibility to do so; and if you remain on the roster, you will receive a grade.

No make-up work will be accepted except for absences due to a Delta College obligation, jury duty, military, or health issue. Written documentation is required.

Delta Attendance Policy 5150: Any student who fails to attend any class session during the first three sessions of the class at the beginning of a term may be dropped from that class unless the student has advised and obtained an absence approval from the faculty member. The foregoing statement will be read by every faculty member to every class at the first session… and for as many subsequent sessions as the faculty members feels to be necessary.

A student absent for any reason, for more than the number of times the class meets per week, may be dropped from the class for excess absenteeism providing the withdrawal deadline for the semester/term has not passed.

Student Obligations

Expectations of Students in the Classroom

1. Be respectful of all persons.
2. Attend class, on time, until dismissed, and pay attention while in class.
3. Do not distract yourself or others during class. (Put phones away, etc.)
4. Complete and submit worksheets, projects, and exams as scheduled.

Student Rights

Be Aware and Stay Safe

As a student at Delta College, you should know your rights and responsibilities. You can find such under Policies, Procedures, and Standards in the school's electronic catalog (catalog.deltacollege.edu). You can also find information on student rights and responsibilities in the Student Handbook, which you can find via the Student Services Office on the District's webpage.

Campus Safety

Be Aware and Stay Safe

In the District's continuing effort to increase safety and awareness, the District's Police department has adopted several new technologies designed to relay important information and to increase awareness for all who visit our campuses. Students, visitors, and parents are strongly encouraged to sign up for one or all of the emergency alert/notification solutions. Through education and awareness, you will increase your personal safety, as well as the safety of those around you.

Disability Support & Tutoring

Disability and Tutoring Resources are Available

Disability Support

Disability Support Programs and Services (DSPS): If you have a documented disability and need accommodations for this class, please inform the instructor as soon as possible. If you suspect that you may have a disability that has not yet been diagnosed, please contact DSPS for assistance. DSPS is located on the 2nd floor of the DeRicco Building and their phone number is (209) 954-5151, ext 6272.

Tutoring

Math/Science Learning Center (SCMA 162) can help with your math or science assignments, writing assignments, course readings, using your textbook, taking notes in your classes, or studying for tests.

Recording Policy

Classroom Audio/Video Recording Policy

Audio- and video-recording, transmission, and/or distribution of any class content (e.g., lectures, discussions, exam reviews, demonstrations, whiteboard information, etc.) in this class is strictly prohibited unless you have written consent from the instructor.

Authorized recording of class content may be used only by the authorized student. Transmitting, sharing, and/or distributing any recording of class content from this class onto public, commercial, or social media sites is strictly prohibited.

Cheating

Cheating Policy

Cheating in any form (e.g., plagiarism; using any notes or an unauthorized electronic device, talking, or looking at another student's answers during an exam; or copying/sharing worksheets or projects) will result in a grade of ZERO on that exam or assignment, and will be reported to the Vice President of Student Services.

Exam protocol includes the following:

1. Eyes on your own exam.
2. No talking to other students while any students are taking an exam.
3. Once you start an exam, you must submit it for scoring before leaving the classroom.

Failure to follow exam protocol may result in a grade of ZERO on that exam or final.

Grading

Letter Grades

The final grade will be based on the total points earned divided by the total points possible for the class.

93 to 100%	A	73 to 76%	C
90 to 92%	A-	70 to 72%	C-
87 to 89%	B+	67 to 69%	D+
83 to 86%	B	63 to 66%	D
80 to 82%	B-	60 to 62%	D-
77 to 79%	C+	59% or below	F

Subject to Change

Course Work and Points

The number of assignments, worksheets, projects, exams, points, and the schedule are tentative, and may be adjusted per the needs of the class as determined by the instructor.

Course Outline

Units and Chapters for the Course

Unit 1: Introduction
- 1.1 Definitions
- 1.2 Groups
- 1.3 Scales of Measurement
- 1.4 Frequency Distribution
- 1.5 Algebra Review

Unit 2: Descriptive Statistics
- 2.1 Types of Figures
- 2.2 Shapes of Curves
- 2.3 Measures of Central Tendency
- 2.4 Measures of Variability
- 2.5 The Normal Distribution Rule

Unit 3: Inferential Statistics
- 3.1 Standard Scores
- 3.2 Correlation
- 3.3 Coefficient of Determination
- 3.4 Multiple Correlation
- 3.5 Linear Regression

Unit 4: Interval & Ratio Tests
- 4.1 Hypothesis
- 4.2 Need for Statistical Tests
- 4.3 The Student's T Test
- 4.4 Analysis of Variance
- 4.5 Post-hoc Tests (Tukey)

Unit 5: Nominal & Ordinal Tests
- 5.1 Samples
- 5.2 Sampling Techniques
- 5.3 One-way Chi-square Test
- 5.4 Two-way Chi-square Test
- 5.5 Cramer's Phi

Assignments, Exams, & Points

Course Work and Points

1. There are five 50-point worksheets.
2. There are five 50-point projects.
3. There are five 100-point exams.

- The final exam can replace up to two worksheets, two projects, and two exams.

All assignments/exams are to be completed on your own, unless otherwise instructed. All assignments are due in hard copy form at the beginning of class. *Do not email your assignments. Do not leave assignments at my office.* Keep returned assignments in case there is a question regarding your grade. You will need six 100-question scantrons – one for each exam, including the final.

Schedule

Assignment Due Dates and Exam Dates

Aug 27	Introduction
Aug 29	Lecture 1.1-1.2
Sep 03	Lecture 1.3-1.4
Sep 05	Unit 1 Worksheet Due
Sep 10	Unit 1 Project Due
Sep 12	Unit 1 Exam
Sep 17	Lecture 2.1-2.3
Sep 19	Lecture 2.4-2.5
Sep 24	Unit 2 Worksheet Due
Sep 26	Unit 2 Project Due
Oct 01	Unit 2 Review
Oct 03	Unit 2 Exam
Oct 08	Lecture 3.1-3.3
Oct 10	Lecture 3.4-3.5
Oct 15	Unit 3 Worksheet Due
Oct 17	Unit 3 Project Due
Oct 22	Unit 3 Review
Oct 24	Unit 3 Exam
Oct 29	Lecture 4.1-41.3
Oct 31	Lecture 4.4-4.5
Nov 05	Unit 4 Worksheet Due
Nov 07	Unit 4 Project Due
Nov 12	Unit 4 Review
Nov 14	Unit 4 Exam
Nov 19	Lecture 5.1-5.3
Nov 21	Lecture 5.4-5.5
Nov 26	Unit 5 Worksheet Due
Nov 28	Thanksgiving -- No Class
Dec 03	Unit 5 Project Due
Dec 05	Unit 5 Review
Dec 10	Unit 5 Exam
Dec 12	Final Review
Dec 19	*8:00am – 9:50am* **Final Exam**

The schedule is tentative and may be adjusted per the needs of the class as determined by the instructor.