

Advanced Statistics
PSYC 4317, Spring 2014
TTH 9:00-10:20 a.m., LART 307

Course Syllabus

Instructor: Julia Lechuga, Ph.D.
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Office Hours: Psychology building room 107 MW 1:30-2:20 a.m., or by appointment.
Textbooks: Gravetter, F. J., & Wallman, L. B. (2013). Statistics for the Behavioral Sciences. 9th Ed. Belmont, CA: Wadsworth.
Pallant, J. (2010). SPSS Survival Manual. 4th Ed. Australia: Allen & Unwin.

General Course Goals: This course is designed to expose students to the basic and advanced concepts of statistics including organization and description of data and statistical inference. Although calculations will be performed emphasis will be placed on statistical reasoning skills and concepts. Topics covered will include simple descriptive and inferential statistical techniques; Correlation, linear regression, and the various forms of the analysis of variance (ANOVA). The use of statistical software will be taught through scheduled meetings in the computer lab.

Specific Course Objectives:

- Learn the rationale behind concepts of probability and statistics.
- Perform statistical procedures and learn how to interpret them.
- Get acquainted with the important role of statistics in research.
- Acquire the skills to evaluate research manuscripts and information in the media about the results of research, statistically speaking.

Evaluation

Your final grade for this course will be based on the following components:

Statistical Literacy Packets: During class sessions you will be assigned to a group and will read, summarize, and critique a research article.

Project write up: See attached sheet of instructions.

Homework: Homework assignments will vary but will mostly include web-based videos and exercises.

In class group assignments: These will be scheduled during class sessions and will serve the purpose of helping you practice statistical procedures.

Quizzes: There will be **eight** quizzes during the semester. Quizzes will include concepts and calculations. *The two lowest quiz grades will be dropped.* Statistical tables will be provided and calculators may be used when required.

Exams: There will be **three hourly exams** during the semester and a **final comprehensive examination** which is scheduled December 10th from 10:00 am to 12:45 pm. Statistical tables will be provided as needed. Calculators may be used on exams.

Exam 1 Ch. 1-7 **Tuesday, Sept 24**

Exam 2 Ch. 8-13

Exam 3 Ch. 14-16

Final Exam Cumulative

MAKE-UPS: Make-up tests or quizzes will *only* be given for **legitimately documented** reasons. Arrangements **must** be made **prior** to the scheduled examinations (except for emergencies, which I **must** be notified of right away, by phone or e-mail)!

Full credit on assignments and exam problems: You need to show your justification for or work on each homework or exam problem. Answers without work will **not** receive full credit.

Final Grade:

Your final course grade will be based on the following weighting of assessment components: Quizzes will be 10% of your grade, in-class assignments 10%, homework 10%, computer lab exercises 5%, exams 30%, statistical literacy packets 15%, and the project write up 20%.

Total Possible Points:

Statistical Literacy Packet:..... 40 points (each article summary is worth 20 points)
(group)

Project write up:.....60 points

 Introduction...10 pts

 Method.....25 pts

 Results.....25 pts

Poster.....30 points (group)

 Introduction.....5 pts

 Method.....10 pts

 Results.....10 pts

 Discussion.....5 pts

In class assignments.....assigned points will vary (group)

Homework.....assigned points will vary

Quizzes:each will be worth 5 points (group)

Exams:assigned points will vary

FINAL EXAM:..... 100 points

Final course grades will be assigned based on the following grading scale

A	B	C	D	F
100 - 90	89 - 80	79 - 70	69 - 60	59 - 50

Attendance and Participation: In order to do well in the class, attendance is essential. Class participation will be expected.

Calculators: A calculator (with statistical functions) may be used for homework, quizzes, and exams. No cell phone calculators will be allowed during quizzes and exams.

Cell phones: Cell phones must be either turned off or put on vibrate during class, as cell phones ringing during class disrupt the learning process.

Disabilities: If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. They will give you the proper paperwork to turn in to me. Please do this as soon as possible.

Note: Schedule is subject to changes

Class Schedule
January/February 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Jan 20	Jan 21 Syllabus Review Chapter 1: Introduction to Statistics HMW 1	Jan 22	Jan 23 Chapter 2: Frequency Distributions Chapter 3: Mean, Median, and Mode HMW 2	Jan 24	Jan 25
Jan 26	Jan 27	Jan 28 Chapter 4: Variability, Range, Standard Deviation HMW 3	Jan 29	Jan 30 Chapter 5: Z-Scores	Jan 31	Feb 1
Feb 2	Feb 3	Feb 4 Computer lab session HMW 4	Feb 5	Feb 6 Chapters 6: Probability HMW 5	Feb 7	Feb 8
Feb 9	Feb 10	Feb 11 Chapter 7: Distribution of sample means	Feb 12	Feb 13 Review exam 1	Feb 14	Feb 15
Feb 16	Feb 17	Feb 18 Exam 1 HMW 4	Feb 19	Feb 20 Chapter 8: Introduction to hypothesis testing Chapter 9: t-statistic	Feb 21	Feb 22
Feb 23	Feb 24	Feb 25 Chapter 10: t-test for two independent samples	Feb 26	Feb 27 Computer lab session		

Class Schedule
Mar/April 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Mar 4 Chapter 11: t-test for two related samples	Mar 5	Mar 6 Statistical literacy packet HMW 5	Mar 7	Mar 8
Mar 9	Mar 10	Mar 11 No Classes-- Spring Break	Mar 12	Mar 13 No Classes-- Spring Break	Mar 14	Mar 15
Mar 16	Mar 17	Mar 18 Chapter 12: ANOVA HMW 6	Mar 19	Mar 20 Chapter 13 : Repeated measures ANOVA	Mar 21	Mar 22
Mar 23	Mar 24	Mar 25 Computer lab session	Mar 26	Mar 27 Review Exam 2	Mar 28	Mar 29
Mar 30	Mar 31	Apr 1 EXAM 2	Apr 2	Apr 3 Chapter 14: Two- factor ANOVA	Apr 4	Apr 5
Apr 6	Apr 7	Apr 8 Statistical literacy packet HMW 7	Apr 9	Apr 10 Chapter 15: Correlation	Apr 11	Apr 12

Class Schedule
Apr/May 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Apr 13	Apr 14	Apr 15 Chapter 16: Regression	Apr 16	Apr 17 Computer lab session	Apr 18	Apr 19
Apr 20	Apr 21	Apr 22 Review Exam 3	Apr 23	Apr 24 EXAM 3 HMW 8	Apr 25	Apr 26
Apr 27	Apr 28	Apr 29 Chapter 17: Chi- square statistic	Apr 30	May 1 Chapter 18: The binomial test	May 2	May 3
May 4	May 5	May 6 Poster due	May 7	May 8 Review Final Exam Project write up due	May 9 Dead Day	May 10
May 11	May 12	May 13 Final Exam 10:00-12:45	May 14	May 15	May 16	May 17
May 18	May 19	May 20	May 21	May 22	May 23	May 24

Project Write Up

You are expected to analyze and write up a manuscript on APA style using made-up data from a mock research study. The study may be a descriptive or experimental study. Essentially, you will be assigned a data set and are to write up an **APA style** report of the study.

You will turn in a written report individually. This report must be your own work. Furthermore, you will present a poster with your team in an in-class session. The poster must include title, introduction, method, results, and discussion. The individual report must include a title page, an introduction section, a method section, a results section, and a reference section. The report does *not* need to have an abstract or discussion section.

Purposes:

1. To show that you know APA style.
Even if you do not go on to graduate school, the ability to write a report that looks professional and does not waste words (two hallmarks of APA style) should serve you well.
2. To develop a better understanding of how articles are organized.
Once you understand what should be included in each section of the paper, you should have an easier time understanding articles that you read.

Poster: developed in power point (instructor will conduct a session), to be printed at Technology Support Center located in the Library Room 300.

Report: It should be about 6 pages long, although a paper with a perfect score could be as short as 4 pages or as long as 8 pages. Most papers will be 5 to 6 pages long.

Due Date: The poster is due Dec 3rd. The report is due Dec 5th.