

Statistics and Research Design

PSYC 2317, Summer 2016, CRN#30989



INSTRUCTOR: Dr. Michael C. Hout

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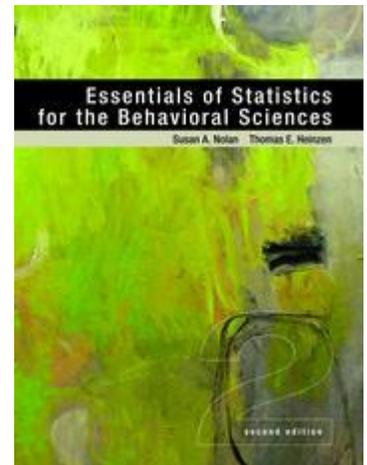
Office hours: Monday – Friday, 11:00 – 12:00 pm

Classroom: Valle Verde Building B, room B164; M-F, 9:00 – 10:50 am

Please review this syllabus and Blackboard before you send an email. Most of your questions can be answered using this document.

COURSE MATERIALS:

1) Textbook: Essentials of Statistics for the Behavioral Sciences, 2nd Edition by Susan A. Nolan and Thomas E. Heinzen (Worth Publishers). ISBN: 9781464195679



2) Blackboard: Everything you need to know about this course can be found on Blackboard at <https://online.epcc.edu/>. This includes the syllabus, grades, homework assignments, computer labs, and all other course material. I will also post announcements occasionally. Content on the Blackboard site will be updated constantly as we progress through the course. It is your responsibility to check Blackboard on a regular basis! That means once per day (preferably in the morning, especially on days when you have class).

3) Study Resources: I very strongly encourage you to make friends in this course. Other students can often be helpful study partners, and can provide you with notes in case you need to miss class. I will NOT repeat lectures for you if you are absent, so you must acquire notes from another student if you are to miss class. If you encounter any difficulties keeping up with the course content, come to meet with me sooner (rather than later). I'm happy to help out, but be prepared to meet with me, and leave adequate time before the next exam, end of semester, etc.

COURSE DESCRIPTION AND GOALS:

This course is designed to introduce students to statistics and experimental design in the psychological sciences. Thus, the purpose of this course is two-fold: 1) to obtain a basic knowledge of inferential and descriptive statistics, including performing and interpreting statistical analyses, and 2) to obtain a basic

knowledge of the research process, including experimental design. Additionally, students will become experienced at evaluating knowledge sources, reading graphs, using Microsoft Excel, and writing statistical results in APA style.

This course is intended to provide you with a strong foundation in basic statistics. My hopes are that you will acquire an ample understanding of the theory behind numerous statistical procedures that are commonly implemented in the psychology literature, and that you will be able to compute and interpret these statistics for yourselves. I'm excited to teach this course, and I hope you're excited to take it.

COURSE FORMAT:

This course will include a combination of traditional lectures, with more hands-on “labs”, and in-class activities. I VERY strongly encourage class participation throughout. The activities will include computer labs and sometimes discussions/collaborations. The goal of the computer labs is to allow you a chance to implement the statistical procedures that you learn about in lecture. Microsoft Excel will be used in all the labs. After each class, I will post my lecture slides online. All of the homework and lab material and in-class activities will be made available on Blackboard.

GRADING:

Below is the breakdown of how you will be graded. Note that the specific number of in-class activities, homeworks, and quizzes is subject to change, depending on the demands of the class. I may choose to lighten the load by removing some assignments, but I will never add more. And the number of attendances and exams will not change under any circumstance.

	Amount	Points each	Total Points	Percentage
Attendance	20	3	60	6%
In-Class Activities	19	10	190	20%
Homework	4	40	160	16%
Quizzes	8	20	160	16%
Exams	4	100	400	41%
			970	100%

Points	Percentage	Grade
890-968	≥ 92%	A
803-889	83% - 91%	B
677-802	70% - 82%	C
580-676	60% - 69%	D
≤ 579	≤ 59%	F

*I reserve the right to round grades. The plus/minus system will not be used in this class.

**Extra Credit may be offered at the end of the semester, at the discretion of the instructor.

GRADING POLICIES:

1. Attendance (6%): Attendance is required, and crucial to be successful in this course. Consistent attendance will be taken into consideration if you have a borderline grade. Attendance will be taken at the beginning of each class period. Students will initially receive 60 attendance points. Students will lose 3 attendance points for every class period that they are absent, arrive more than 20 minutes late, or leave more than 20 minutes early without a documented excuse or consent of the instructor. Students are allowed to miss up to two days of excused absences before attendance points will be deducted. Students will lose 2 attendance points for every class period that they arrive more than 10 minutes late or leave more than 10 minutes early without a documented excuse/consent of instructor (the exception is when students are allowed to leave following the completion of an assignment or exam). Attendance points will only be given on non-exam days, as attending the day of an exam is not optional.

2. In-Class Activities (20%): These are activities that will be administered and completed during class. You will not turn the activities in, but it is required that I check off your activity for correctness and completeness before you leave each day. You can work in small groups, but each student will complete their own, individual activity. In-class activities are worth 10 points each and only up to two activities can be made up for points if missed. However, interested students can obtain a copy of the activity from Blackboard if they would like to complete it for practice, although they will not be able to submit the activity for points. In-class activities are designed to allow you to practice concepts in class and are graded on completion only.

2. Homework (16%): Homework will be posted on Blackboard. Please turn in a copy of your homework in person during *the beginning* of class on the due date (see class schedule for due dates). There will be four homework assignments throughout the semester, worth 40 points each. Homework is to be completed *individually*.

*Late assignments will be accepted. However, you will lose 10 points for each day the assignment is late. Students turning in late assignments can submit the assignments electronically if they are submitting on a day class will not be held, as long as they submit a hard copy during the following class period.

3. Quizzes (16%): Eight quizzes will be administered at the beginning of class throughout the semester. Tentative quiz dates are listed on the class schedule, but are subject to change. Quizzes will take about 15-20 minutes to complete. The quizzes are designed to increase comprehension and also increase familiarity with the course material. Quizzes should be viewed as a tool to boost your grade for this course. You will be allowed to correct and resubmit the quiz that you received the lowest grade on (including a quiz you missed due to absence/tardiness). Missed quizzes cannot be made up, even if you have an excused absence. If you come in late after all students have submitted their quiz, you will be unable to take the quiz. The quizzes are worth 20 points each.

4. Examinations (41%): There will be four examinations in this course. *You must take all four exams.* Make-up exams are available for *excused absences only* (e.g., a court excuse, a doctor's note stating you were contagious, proof of death of an immediate family member). However, please keep in mind that the exams will require the use of Excel, and the testing center does not allow computers. Therefore, you may not be able to take the make-up exam immediately, depending on schedules. Specific topics for each exam will be discussed in class prior to the exam and posted on Blackboard. The final (4th) examination cannot be made up. I urge you to make every effort to attend the final. If there is an emergency, please contact me immediately. Do not remove exams from the classroom; they must be submitted to me before leaving the class. Exams will be open book, but I encourage you to know the material ahead of time, rather than to rely on the book during the exam. That will slow you down, and you will not be given additional time to complete the exam.

Some friendly advice:

This is a critical thinking, fast-paced course. If you want to do well in this course, you MUST:

- Attend class: Arrive prepared and on time; attendance is critical!
- Take accurate notes: Pay attention and participate in class.
- Stay current: Do your homework early and complete study guides.
- Work Hard! If you need help: talk to me, talk to your classmates, get tutoring.

Useful Resources:

- Valle Verde Campus Computer Lab: Building A, Room A-1721, and Building B, Room B-120. Hours for both labs: Mon-Thurs 6am – 9:15pm, Fri 6am – 4:15pm, Sat 8am-5:15pm, Sun: Closed
- ASC Student Laptop Checkout Program: Current EPCC students may check out a laptop for 3 hours, 24 hours, or the weekend with two forms of ID. Check-out in the VV computer labs.

El Paso Community College Official Course Description

AREA: Psychology

COURSE RUBRIC AND NUMBER: PSYC 2317

COURSE TITLE: Statistics and Research Design

COURSE CREDIT HOURS: 3 credits, (Lecture: 3; Lab: 0)

I. Catalog Description

Examine basic descriptive and inferential statistical concepts as they apply to behavioral science research. Includes the topics of basic experimental design, descriptive statistics, correlation, analysis of variance, and nonparametric analyses, along with Computer Applications. Prerequisite: MATH 0305 or placement by exam. (3:0).

II. Course Objectives

Upon satisfactory completion of this course, the student will:

- A. Understand the methodology and statistics used in basic behavioral science research.
- B. Calculate and interpret basic descriptive statistics (such as frequency distribution, measures of central tendency, and measures dispersion).
- C. Calculate and discuss the implications of correlational data.
- D. Discuss how probability helps in making inferences
- E. Conduct basic statistical methods using a computer, by being able to enter data and interpret results.
- F. Evaluate the appropriate use of statistical and research methodology in the social science research literature.

III. Evaluation

A. Remediation

The opportunity for re-examination is at the discretion of the instructor. Students who perform at an unsatisfactory level should be encouraged to avail themselves of tutoring.

B. Grading

Course grades will be consistent with grade descriptions contained in the current EPCC catalog. The student should consult the Instructor's syllabus for greater detail, as the grades are at the discretion of the instructor.

IV. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentations are kept confidential.

Office Locations:

VV, Room C-112 (831-2426)

TM, Room 1400 (831-5808)

RG, Room B-201 (831-4198)

NWC, Room M-54 (831-8815)

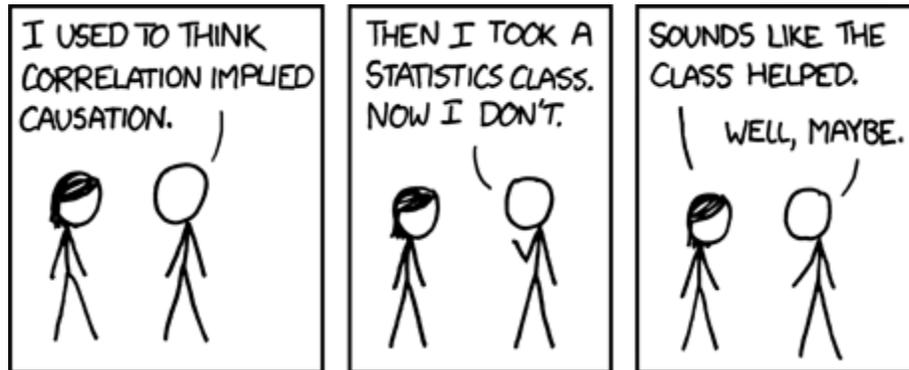
MDP, Room A-125 (831-7024)

V. The 6-Drop Rate

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit, and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

DISCLAIMER:

This syllabus is subject to change without notice!



TENTATIVE COURSE SCHEDULE BELOW!

Date	Day	Content	Quiz	HW	Reading
31-May	Tuesday	Syllabus, Math Assessment, What is research?			Ch1
1-Jun	Wednesday	The Basics: Variables, Terms, Scale of Measurement			
2-Jun	Thursday	Frequency Distributions	Q1: Skepticism and the basics		Ch2
3-Jun	Friday			HW1 Assigned	
6-Jun	Monday	Central Tendency and Variability			Ch4
7-Jun	Tuesday		Q2: Frequency Distributions		
8-Jun	Wednesday	The Normal Curve, Standardization, Z-scores			Ch6
9-Jun	Thursday		Q3: Central tendency / variability	HW1 Due	
10-Jun	Friday	EXAM 1 (Chapters 1, 2, 4, 6)		HW2 Assigned	
13-Jun	Monday	Review of Exam 1; Sampling Distribution of the Mean			Ch5
14-Jun	Tuesday	Intro to Hypothesis Testing; Power and Effect Size			Ch7
15-Jun	Wednesday	Single Sample t-test			Ch8
16-Jun	Thursday	Paired Sample t-test	Q4: Single sample t-test	HW2 Due	Ch9
17-Jun	Friday	EXAM 2 (Chapters 5, 7, 8, 9)		HW3 Assigned	
20-Jun	Monday	Review of Exam 2; Independent t-test			Ch10
21-Jun	Tuesday	One-way ANOVA	Q5: Independent t-test		Ch11
22-Jun	Wednesday	Two-way ANOVA			Ch12
23-Jun	Thursday		Q6: One-way ANOVA	HW3 Due	
24-Jun	Friday	EXAM 3 (Chapters 10, 11, 12)		HW4 Assigned	
27-Jun	Monday	Correlation			Ch13
28-Jun	Tuesday	Regression	Q7: Correlation		Ch14
29-Jun	Wednesday				
30-Jun	Thursday	Ethical Research	Q8: Regression	HW4 Due	
1-Jul	Friday	EXAM 4 (Chapters 13, 14)			