PSYC 2351
Fall 2019

Course Information: PSYC 2351.003 Tuesday & Thursday 11:00-12:20

Classroom: Ratliff Building North 04024

Professor Information: Samantha Estrada Aguilera PhD

Office Hours: W 9:00-10:30 T 12:45-2:15 or by appointment

Teaching Assistant: TBA

Textbook Information:
Heiman, G. (2013). Basic statistics for the behavioral sciences. Cengage Learning. 7th Edition
ISBN-13: 978-1133956525
ISBN-10: 1133956521

A student at UT-Tyler is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Suggested Calculator: TI-84 Plus

- Other models such as TI-84, TI-83, TI-89 may have the statistical capabilities so you can always check with me if you have this type of calculator HOWEVER I am not an expert in all calculator mostly I am familiar with TI-84 Plus so it will be your responsibility to learn how to use your device.
- In general, a scientific calculator should work. But I will show you shortcuts in the TI-84 it is up to you if you want to use these shortcuts or not.

Course Catalog Description

An introduction to descriptive and inferential statistical methods used in psychological research. Emphasis will be on hypothesis testing with t-tests, analysis of variance, correlation, and selected nonparametric techniques.

Student Learning Outcomes & Assessments

Upon successful completion of the course, the student will be able to ...

1. **Demonstrate an understanding of the differences between and uses of descriptive and inferential statistics**. (BS/BA 6.0)
2. **Demonstrate an understanding of the differences between parametric and nonparametric statistics** (BS/BA 6.0)
    a. Define and distinguish between a population and a sample.
    b. Define and distinguish between statistics and parameters.
    c. Classify data with respect to the four levels of measurement.
3. **Compute statistical tests manually (with a calculator) and interpret and explain results.** (BS/BA 6.0)
    a. Compute and explain measures of central tendency and find the mean, median and mode of a sample and a population
    b. Compute and explain variability: range, variance and standard deviation

c. Calculate and interpret standard z scores and information gained through normal distribution tables.
d. Calculate and interpret correlation coefficients using the Pearson and the Spearman.
e. Explain regression and predict y-values using regression the equation.
f. Calculate and interpret standard error of the estimate and proportion of variance accounted for.
g. Discuss hypothesis testing and how to state the null and alternative hypotheses
h. Interpret the level of significance of a hypothesis test (p-values)
i. Identify type I and type II errors, and the probabilities associated with them.
j. Discuss the power of an analysis and the factors that affect it.
k. Perform one and two sampled t-tests, determine significance, and interpret the results.
l. Explain an F-test, calculate and interpret a one-way ANOVA
m. Calculate and interpret a two-way ANOVA
n. Calculate and interpret non-parametric tests such as the Mann-Whitney U, the Wilcoxon rank test, and Chi Squares.
o. Graph different types of data manually and describe the information contained in them.

4. **Be able to identify the independent and dependent variables of experiments, determine the design and the correct statistical analyses with which to test appropriate hypotheses. (BS/BA 6.0)**

Evaluation and Grading

Determined by the following:

Homework	10%
Projects	10%
Written Tests (x3)	50%
In class activities/Worksheets	15%
Final Exam	15%

Grading Scale

90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 69%	D
0 - 59%	F

Exam Wrapper

- The document for exam wrappers are posted on CANVAS.
- You will submit your exam wrapper via the Assignments section of CANVAS after you receive your test. This activity will count toward the Projects percentage of your grade.
- We will have two “midterm” exams so there will be two exam wrappers.
    - If you score below <60 in a test you must make an appointment with me and have submitted your exam wrapper so we can discuss your success in the course.

Written Tests

- There will be **two** written tests given during the semester.
- Please plan on taking all written tests the day they are scheduled.
    - In case of an emergency you need to notify me immediately and make an arrangement.
- No notes, no books, no homework, and no cell phone may be used while taking tests unless special notice is given by the instructor.

- Formula sheet and statistical tables (if needed) will be provided.

Worksheets

- Worksheets will be part of the In class activities worth 15%. At the end of (most) chapter(s) we will have a worksheet or activity in order to practice the problems. This is a perfect time to ask questions on specific problems.
- You can use your notes, textbook and ask me or your TA for help during this assignment. These assignments will be worth 10 points each.
- There will be no make-ups, so please don't ask. You get to drop **one** worksheet (in case of absences etc).
- I will not announce these in-class worksheet activities, the activities will take place after we finish a chapter it is your responsibility to be in class when we complete these in-class activities.

Reviews

- Reviews for the exams are already posted in Canvas.
- You may print this review and bring it to the class review.

Comprehensive Final Exam

- The final exam will be comprehensive

Email *Net*iquette:

- I will respond to email Monday to Friday from 8-5 pm.
- Make sure your question isn't addressed in this syllabus.
- When you email me identify what course you are in. **State what section, day and time you are in**. I teach more than one statistics class, and more than one section every day.
- Address me as Dr. Estrada. Do not begin your email with "hey"
- Use your UTT email at all times. Do not email me from your private account (eg. coolguy23@gmail.com). If you email me from private email I will NOT respond.
- Do not email me inquiring about your final grade or to help you predict your final grade, unless you believe there should be a correction, the grades will be available in Canvas and you should know what you need to pass the course.

Class Survey

In CANVAS you will find a class survey plan to complete this survey the first week of class. The data from this survey will be used for class examples. However, you are allowed to skip questions if you want to, but mostly the data will be used for class examples will be confidential (not tied to your name/identity). The completion of this survey will go into the Projects percentage of your grade.

Attendance:

Attendance will be taken daily. Students are expected to assume responsibility for their learning by attending all class sessions, participating in class discussions and completing all assignments. Each student is encouraged to develop a professional work ethic in class that reflects responsibility, initiative and teamwork.

Academic Calendar

The University of Texas at Tyler **Academic Calendar** including: deadlines, important dates and more can be found here: https://www.uttyler.edu/schedule/files/academic-calendar-19-20.pdf

Homework

- Homework problems from the Heiman textbook have been selected beginning with Chapter 2..
- I will announce when the problems will be due. Generally, a week after we have completed the chapter.
- I (or the TA) will grade these problems for completion not accuracy. It will be your responsibility to make sure you understand the solutions to the problems. Solutions are provided in the Appendix D of the textbook.

Chapter	Pages	Problem Number
2	p. 33	1, 2, 3, 5, 6, 8, 11-12
3	p. 59	1,2,13,15,17, 21, 23
4	p. 80-83	1, 7, 8, 13,
5	p. 105-107	1, 3, 4,5, 11,14,
6	p. 131	1, 3, 5, 10, 11, 13, 15
7	p. 158-159	3, 4, 6, 7, 12, 18, 19, 20, 21
8	p.181	1,3, 5, 15, 19
10	p. 234	3, 6, 7, 13, 15, 26,
11	p. 259-260	3, 5, 11, 12,13,
12	p. 288	3, 13,15, 16
13	p. 316-317	1, 3, 7, 13, 19
14	p. 347	1,7,17, 19
15	p. 369	5, 7, 9 (only part a), 11, 13, 15

Tentative Schedule

	Tuesdays		**Thursdays**
27-Aug	Ch 1 Intro	**29-Aug**	Ch 2 Variables
3-Sep	Ch 3 Frequency	**5-Sep**	Ch 4 Central Tendency
10-Sep	Ch 5 Variability	**12-Sep**	Ch 6 Normal curve
17-Sep	Ch 6 Normal curve continued	**19-Sep**	**Exam 1**
24-Sep	Ch 7 Correlation	**26-Sep**	Ch 8 Regression
1-Oct	Ch 9 Probability	**3-Oct**	Ch 10 Hypothesis testing and review
8-Oct	**Exam 2**	**10-Oct**	Ch 11 Single-samples test
15-Oct	Ch 11 Single-samples test cont.	**17-Oct**	Ch. 12 Two-samples test
22-Oct	Ch 12 Two-samples test cont.	**24-Oct**	Ch 13 oneway ANOVA
29-Oct	Ch 13 post hoc tests	**31-Oct**	Review
5-Nov	**Exam 3**	**7-Nov**	Ch 14 twoway ANOVA
12-Nov	Ch 14 continued	**14-Nov**	Make-ups & Retakes
19-Nov	**Turkey Break**	**23-Nov**	**Turkey Break**
28-Nov	Ch 15 Chi Square	**30-Nov**	Ch 15 Non parametrics
3-Dec	Choose the Stat	**5-Dec**	Review