EPSY 6350.01
Statistical Methods

INSTRUCTOR: RALPH CARLSON
TERM: SPRING 2019
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EMAIL: ralph.carlson@utrgv.edu
OFFICE LOCATION: EEDU 1.208
OFFICE HOURS: MONDAY~FRIDAY 2:30~4:30 PM

CLASS TIME AND LOCATION: TUESDAY 4:40~7:30 PM  EDCC 2.222

Textbook and/or Resource Material
Required Text:


Course Description and Prerequisites
The content of this course will include exploratory and confirmatory data analysis, introduction to conditional probability and Bayesian statistics, central tendency, variance, normal, \( t \) chi square, and \( F \) distributions, bivariate correlation and regression analysis, \( t \)-test between means, goodness of fit and test of independence chi square, independent groups Model I one-way ANOVA, and two and three-way factorial ANOVA. There will be an emphasis on hypothesis testing, Type I and II errors, an understanding of statistical significance and practical or functional significance. Prerequisite: NONE

Methods of Instruction (teaching)

A. Direct (expository) teaching
1. Lecture method of presentation of content (topic or concept):
   gestalt \( \rightarrow \) parts \( \rightarrow \) gestalt \( \rightarrow \)
2. modeling
3. demonstrations
4. guided practice
5. independent practice

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6. small group/cooperative learning
7. measurement and evaluation

B. Activities
1. homework (independent practice)
2. class discussion
3. review

C. Methods of Learning for Students
1. mnemonic system(s)
2. elaboration of meaning
3. actively thinking about one's thinking
4. management of self and information (content or skills to be acquired)

D. Methods of Measurement and Evaluation
1. grading of homework
2. tests (there will be three tests during the semester)

CROSSWALK COURSE
This course satisfies: Intellectual, professional, and academic development for graduate students, masters and doctoral, and faculty.

Learning Objectives/Outcomes for the Course
Student Learning Outcomes

After instruction/teaching:

1. Students will be able to utilize and engage rational thought and data.
2. Students will know what some of the criteria might be for knowing/science.
3. Students will know what some of the characteristics are for knowledge/science.
4. Students will know and understand the logic system for hypothesis testing.
5. Students will be able to partition variance and covariance into its various sources and error term(s).
6. Students will understand what statistical significance means and what it does not mean.
7. Students will be able to specify the criteria and conditions for falsifying, debunking, or deleting their most cherished hypotheses, ideas, and theories (Sir Francis Bacon).
8. Students will be able to interpret effect size/practical/functional/substantive significance: partial eta squared and Cohen's d.
9. Students will be able to use exploratory and confirmatory data analysis side by side (Tukey, 1977).

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Course Technology
Tools: SPSS (Statistical Package for the Social Sciences)

Technical Knowledge Requirements
You are expected to be proficient with installing and using basic computer applications and have the ability to send and receive email attachments.

Major Requirements, Demonstration of Mastery and Evaluation
Assignments and Assessments

There will be three tests given:

1. Test one covering Chapters 1 through 4 in Hinkle
2. Test two covering Chapters 5, 9, 16, 17, 19, and 20 in Hinkle
3. Test three covering Chapters 7, 8, 10, 13, 14, and 15 in Hinkle

UTRGV University Policies

UTRGV Policy Statements

The UTRGV disability accommodation, mandatory course evaluation statement and sexual harassment statement are required on all syllabi. Additional policy statements are optional, such as those covering attendance, academic integrity, and course drop policies.

STUDENTS WITH DISABILITIES: Required on all syllabi. Do not modify.
If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time.
Brownsville Campus: Student Accessibility Services is located in Cortez Hall Room 129 and

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can be contacted by phone at (956) 882-7374 (Voice) or via email at ability@utrgv.edu. **Edinburg Campus**: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at ability@utrgv.edu.

**MANDATORY COURSE EVALUATION PERIOD:**

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available.

**TBA**

**ATTENDANCE:**

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

**SCHOLASTIC INTEGRITY**: Recommended on all syllabi.

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

**SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE**: *Required on all syllabi. Do not modify.*

In accordance with UT System regulations, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity including confidential resources available on campus. The faculty and staff of UTRGV actively
strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

**COURSE DROPS:** Recommended on all syllabi; may be modified by the instructor as long as it is not inconsistent with UTRGV policy. According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

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**Course Policies**

Attendance Policy (Refer to UTRGV Policy)

**Calendar of Activities**

**Calendar of Activities**

Include in this section a table or list that provides information for students regarding important dates, assignments or activities. The UTRGV academic calendar can be found at http://my.utrgv.edu at the bottom of the screen, prior to login. Some important dates for Spring 2017 include:

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### SPRING 2019

**Spring 2019 Term (January 14 – May 9)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 29 (Mon.)</td>
<td>Registration Begins</td>
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<tr>
<td>Jan. 9 (Wed.)</td>
<td>Payment Due</td>
</tr>
<tr>
<td></td>
<td>Last day to join a waitlist</td>
</tr>
<tr>
<td>Jan. 11 (Fri.)</td>
<td>Last day to withdraw (drop all classes) and receive a 100% refund</td>
</tr>
<tr>
<td>Jan. 14 (Mon.)</td>
<td>Spring classes begin</td>
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<tr>
<td>Jan. 17 (Thurs.)</td>
<td>Last day to add or register for Spring classes</td>
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<tr>
<td>Jan. 18 (Fri.)</td>
<td>Last day to withdraw (drop all classes) and receive an 80% refund</td>
</tr>
<tr>
<td>Jan. 21 (Mon.)</td>
<td>Martin Luther King Jr. Holiday. No classes.</td>
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<tr>
<td>Jan. 28 (Mon.)</td>
<td>Last day to withdraw (drop all classes) and receive a 70% refund</td>
</tr>
<tr>
<td>Feb. 4 (Mon.)</td>
<td>Last day to withdraw (drop all classes) and receive a 50% refund</td>
</tr>
<tr>
<td>Jan. 30 (Wed.)</td>
<td>Census Day (<em>last day to drop without it appearing on the transcript</em>)</td>
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<tr>
<td>Feb. 11 (Mon.)</td>
<td>Last day to withdraw (drop all Spring classes) and receive a 25% refund</td>
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<tr>
<td>Mar. 11 – Mar. 16 (Mon. – Sat.)</td>
<td>Spring Break. No classes.</td>
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<tr>
<td>April 10 (Wed.)</td>
<td>Last day to drop a class (grade of DR) or withdraw (grade of W)</td>
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<tr>
<td>April 19 – April 20 (Fri. – Sat.)</td>
<td>Easter Holiday. No classes.</td>
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<tr>
<td>May 2 (Thurs.)</td>
<td>Study Day. No classes.</td>
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<tr>
<td>May 3 – 9 (Fri. – Thurs.)</td>
<td>Final Exams</td>
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<tr>
<td>May 9 (Thurs.)</td>
<td>Spring classes end; Official last day of the term</td>
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<tr>
<td>May 10 – May 11 (Fri. – Sat.)</td>
<td>Commencement Exercises</td>
</tr>
<tr>
<td>May 13 (Mon.)</td>
<td>Grades Due at 3 p.m.</td>
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This syllabus subject to change in order to better meet course objectives per discretion of instructor. 6