Advanced Statistics for Psychology
Psy 4303-01
Spring 2019
Location: Education Complex (EEDUC) 2.228

Instructor: Jason Popan, Ph. D.
Office: ELABN 358a (inside the department office)
Office hours: Wednesday and Thursday 1:30 – 3:00 p.m. or by appointment.
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File Storage: You will need a reliable place to save your files. There are plenty of free options for file storage (e.g., Google Drive or Dropbox) that you may use. When working on statistical computations, please save early, often, and on a drive you can access to avoid unexpected data loss.

SPSS Access: You will need to access SPSS to complete many of the assignments for this class. Student versions of IBM SPSS software for PC and Mac computers can be purchased at the retailers linked here. You will want to purchase the IBM SPSS Grad Pack Base, it is sold online for approximately $40. Alternatively, if you can come to campus, SPSS can be accessed at several computer labs, including the labs in the Academic Services Building. Another option is to use vlab, which will allow you to remotely access a UTRGV computer that has SPSS. Please note that this option is rather slow, and you will need to be careful to verify that you are saving your work on your computer or cloud and not the drives on the remotely accessed computer.

Course Description

This course is will build on analyses learned in basic statistics courses. After reviewing topics commonly covered in basic statistics, such as null hypothesis significance testing of correlations and differences between means, the course will then cover regression and analysis of variance in depth. Students will learn to conduct and interpret statistical analyses using IBM SPSS and gain experience reporting data analysis results and conducting a research project. In addition to univariate analyses such as analysis of variance and multiple regression, the course will introduce multivariate techniques, including Multivariate analysis of variance and factor analyses.
**Student Learning Objectives for a Psychology Major**

1. Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
2. Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
3. Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

Students who successfully complete this course should be able to: 1) prepare data (in SPSS) for analyses, 2) conduct hypothesis tests using the statistics that are covered, 3) interpret and report the results of statistical analyses, 4) interpret research findings based on the statistical tests covered, 5) select appropriate analyses for research questions, hypotheses, and designs that they encounter, 6) conduct statistical data analyses for research project that require the analyses covered in the course (e.g., analysis of variance, multiple regression, factor analysis).

**COMMUNICATION POLICY**

Email is the method of communication that I prefer for this course. I check my email much more regularly than my voicemail. In the event that you have sent me an email message that I have not responded to in a timely manner (i.e., within two weekdays), you should resend it. You are also welcoming to come by during my office hours.

**COURSE REQUIREMENTS**

**Attendance**

Regular class attendance is expected. Any lecture and lab material may be present on the exams. Excessive absences will impact your participation grade and make successful preparation for the exams extremely difficult.

**Assignments**

Assignments will be posted on Blackboard. The purpose of the assignments is to practice the material encountered in lecture and to gain experience using SPSS, a statistical analysis software program. Ten lab assignments will be posted throughout the course. These assignments will be worth 10 points each toward your grade, for a total of 100 points. You will be given 1 week to complete lab each assignment.

**Exams**
Two exams will be given (midterm and final). Each exam will be worth 100 points. Exams will not be “curved.” The exams may consist of conceptual, computational, and interpretation questions. The exam questions will be similar in format to the assignments. The questions will not be multiple-choice. Access to a calculator and SPSS will be needed for exams. Exams will be available for 3 business days after they are posted. Thorough preparation is needed to complete the exam in the allotted time. It is not possible to learn and look up the material during the exam. You will simply run out of time. Study and prepare for exams.

Late Work

Late work will not be accepted. Assignments and exams must be submitted within the timeframe that they are made available.

Grading

There are 400 points that can be earned during this course. You will be graded on each of the course components listed below.

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<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>____/100</td>
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<tr>
<td>Exam 2</td>
<td>____/100</td>
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<tr>
<td>Lab Assignments</td>
<td>____/100</td>
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<tr>
<td>Research Report</td>
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<td>Total</td>
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Final grade letters will be assigned according to the following scale:

- A = 360-400 points
- B = 320-369 points
- C = 280-319 points
- D = 240-279 points
- F < 240 points

Students with disabilities (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who suffer a broken bone, severe injury or undergo surgery during the semester are eligible for temporary services.

Pregnancy, Pregnancy-related, and Parenting Accommodations

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting
(reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

**Student Accessibility Services:**

**Brownsville Campus:** Student Accessibility Services is located in Cortez Hall Room 129 and 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 on or about:

- **Module 1** February 13 – 19
- **Module 2** April 10 – 16
- **Full Spring Semester** April 10 – May 1

**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:**

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 (including self-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:**

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 that is free from sexual
misconduct and discrimination. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OVAVP (Office for Victim Advocacy & Violence Prevention) at 665-8287, 882-8282, or OVAVP@utrgv.edu.

**COURSE DROPS:**
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.

**STUDENT SERVICES:**
Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:
- Learning center: BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
- Writing center: BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
- Advising center: BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
- Career center: BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)

**SCHEDULE**

The anticipated topic and exam schedule are below. Please access Blackboard regularly to maintain awareness of any changes to our schedule. Supplemental readings will be posted on Blackboard.

**Week 1**

Syllabus and Review (Chapters 1, 2, 3, 5, 7)

**Week 2**

Review (Chapters 1, 2, 3, 5, 7)

**Lab Assignment 1 Posted**
Week 3
Getting to know your data (Chapter 4)

Week 4
One-way ANOVA (Chapter 6)

Lab Assignment 2 Posted

Week 5
Factorial ANOVA (Chapter 14)

Week 6
Bivariate regression (Chapter 9)

Week 7
Multiple regression (Chapters 10, 11,)

Week 8
Review and Midterm exam 3/7

Week 9
Multiple regression cont’d and Dummy coding in regression (Chapter 12 & 14)

Lab Assignment 3 Posted

Week 10
Moderation in Regression (Chapter 15)

Lab Assignment 4 Posted

Week 11
Mediation in Regression (Chapter 16)

Week 12
Analysis of covariance (Chapter 17)

Week 13

Multivariate Analysis of Variance (Chapter 19)

Week 14

Factor Analysis (Chapter 20)

Lab Assignment 5 Posted

Week 15

Buffer week and final exam review.

Final Exam, TBA