

STATISTICS IN INTELLIGENCE AND CRIMINAL JUSTICE
INSS 5361, CRN #22789
TR 4 :30 – 5 :50
LIBERAL ARTS BUILDING, ROOM 403
THE UNIVERSITY OF TEXAS AT EL PASO
SPRING, 2024

I. Misty Duke, PhD
Office phone: 915-747-8573
Office hours Tuesdays 10:00-12:00, Education Building, Room 111-R
mcduke@utep.edu

II. **TEXTBOOK**

Bennet, J. O., Briggs, W. L., & Triola, M. F. (2021). Statistical reasoning for everyday life, 5th edition. Pearson. ISBN-13: 9780134494043

Additional readings must be downloaded by students from the University library or may be available on Blackboard.

It is *extremely* important that assigned chapters be read prior to each class period. The lectures are meant to supplement and clarify the readings, not as a substitute for the readings. You are very unlikely to do well in this course if you do not read the assigned material.

III. **COURSE OBJECTIVES**

Upon satisfactory completion of this course, the student will be able to:

- A. Understand the statistical concepts and methods necessary for quantitative analysis of intelligence and criminal justice problems.
- B. Analyze data by graphs, charts, and inferential statistical tests.
- C. Acquire computing skills with SPSS.
- D. Apply quantitative reasoning to decision-making regarding intelligence, national security, and criminal justice.

IV. **COURSE CATALOG DESCRIPTION**

This course provides the basic elements of statistical analytic techniques for intelligence and criminal justice research, allowing students to formulate and test hypotheses related to quantitative research in these fields. Students will learn to conduct analyses using statistical software, such as Excel and SPSS.

V. COURSE REQUIREMENTS

A. Quizzes (20%)

There will be weekly quizzes. The purpose of the quizzes is to help you to test your understanding of the material so that you can be prepared for the exams. Each quiz will consist of 10 multiple-choice, true/false, or short answer questions. The quizzes will be taken in Blackboard. Each quiz will become available at 12:00 pm and will remain available until 11:59 am the day that it is due. The quizzes will be timed; the time available will depend upon the difficulty of the questions. The system will force you to submit your answers once your time is up. The two lowest-scoring quiz grades will be dropped from the total quiz score. See the class calendar for the due dates of the quizzes. You will not be able to take quizzes past the due date; if you miss a quiz, you will receive a grade of 0.

C. Exams (40%)

There will be two exams. The exams will include questions requiring you to interpret data from graphs or charts, interpret descriptive statistics and the results of statistical tests, and demonstrate your conceptual understanding of statistical concepts. You will NOT be required to memorize formulas. The second exam will not be cumulative. If you must miss the exams for any reason, you must see me prior to the exams to discuss alternate arrangements.

Information covered on the exam will be taken from the book and class discussions. All of the information in the book will not be covered in the class. You are responsible for reading and knowing the assigned book material. Additionally, all of the information covered in class will not be in the book. You are responsible for coming to class regularly. If you miss a class, you are responsible for obtaining notes from a classmate. The scores on the exams will be adjusted so that the average score is 80% of the maximum possible points.

Exam 1 will be made available on Blackboard at **4:30 pm on March 21st**. Once you begin taking the exam, you will have 80 minutes to finish it. Exam 2 will be made available on Blackboard at **4:00 pm on May 7th** and you will have three hours to finish it. The system will force you to submit your answers once your time has finished.

D. Data analysis papers (30%)

You will be required to complete four assignments in which you either (a) read a research paper or research report and answer questions that require you to demonstrate your interpretation of the data and the conclusions drawn from the data or (b) carry out statistical analyses using a data set and provide your findings in a written report. The papers must be turned in via Blackboard. The papers will be due on **February 19th, April 1st, April 15th, and May 6th**. Failure to turn in the paper on time will result in a 2% deduction from your grade for every day that it is late.

E. Class participation (10%)

You will be graded according to your level of participation in classroom activities (e.g., level and quality of discussion and responses to questions posed to the class, cooperation with classmates in small-group activities) and attendance. You will be allowed to have three class absences. Any absences beyond that will affect your class participation grade. If you have an extraordinary situation that requires extensive class absences, please schedule a time to discuss this with me.

F. Chapter Review Questions (Optional)

It is recommended, but not required, that you complete the Chapter Review questions at the end of each chapter. The solutions for these questions have been provided on Blackboard so that you can grade your own work. These assignments are intended to consolidate your knowledge of the content covered during the course. You are strongly encouraged to complete some or all of the assignment each week. In past courses it has been found that students who regularly completed homework assignments performed better on the exams.

G. Research participation (Extra credit)

You may earn up to three percentage points, to be added to your final grade in the course, by participating in research studies. To earn the credit, you must sign up for one or more research studies via SONA (<https://utep.sona-systems.com>). Please refer to the handout "Sona System Policies-Participant Guide" for instructions on how to obtain a participant account in SONA and how to use the SONA system. You will earn one percentage point for each hour of research participation. I strongly encourage you to complete these credits early in the semester if you choose to seek credit. If you would like an alternative assignment to earn extra credit, please meet with me to discuss this.

H. Software problems (Extra credit)

You may earn up to eight percentage points, to be added to your exam grades, by completing the extra credit problems posted within each module on Blackboard. You must earn 100% on the extra credit problems to get credit. You may make corrections to any incorrect parts of the extra credit. When you make corrections, you only need to submit the part(s) that was incorrect. Extra credit for Weeks 2 – 8 will be applied to the Exam 1 grade and extra credit for Weeks 12 – 17 will be applied to the Exam 2 grade. Extra credit not submitted by the due date will not be graded.

VI. GRADING SCALE AT THE END

A = 90 – 100%

B = 80 – 89%

C = 70 – 79%

D = 60 – 69%

F = below 60%

NOTE: Final grades are a weighted average of assignment and exam grades. Final grades are not curved.

VII. INCOMPLETE GRADE POLICY

Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.

VIII. TECHNOLOGICAL PROBLEMS/QUESTIONS

You will need to have access to a computer/laptop. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you do not have word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about Microsoft Office 365 and follow the instructions.

The entire course is run through UTEP's Blackboard system, so students must activate and use their BB accounts regularly. Always log in using your UTEP name and password, and never as a "guest" (the guest option will kick you out after 15-20 minutes, which is problematic when taking a test because you will not be able to finish your test). All students are responsible for regularly logging in and checking for posted announcements, submitting assignments, participating in discussion boards, and taking tests through BB. Contact UTEP tech support for any questions or concerns regarding navigating in BB or learning how to do something in BB.

Please regularly refer to Blackboard for links, documents, announcements, and calendar changes. You are responsible for being up-to-date on all class information that is posted on Blackboard.

Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP Help Desk as they are trained specifically in assisting with technological

needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

IX. COURSE COMMUNICATION

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X. ACADEMIC DISHONESTY

If you are suspected of cheating on the exams or quizzes or collaborating with other students on the critique, the instructor will follow the University's policy regarding student dishonesty, which may result in a grade of zero and referral of the student to the Office of Student Conduct. If you are suspected of plagiarism, the instructor will follow the University's policy regarding student dishonesty, which may result in a grade of zero and referral of the student to the Office

of Student Conduct.

Academic dishonesty or cheating is simply unethical and not acceptable under any circumstances. Plagiarism is a form of cheating that involves “stealing” the words and thoughts of others. It is a very serious academic violation and cannot be tolerated. The most common form of plagiarism is using information or original wording in a paper or other assignment without giving credit to the source of that information or wording. **Plagiarism also includes the direct copying of a source verbatim (word for word) and incorporating that copied material into the student’s paper or assignment without first paraphrasing with proper referencing or placing the copied text into a direct quotation, again with appropriate footnotes or citations.** Students must use their own words when not using direct quotes. Direct quotes should be used sparingly and only when appropriate to provide examples, evidence, or illustrate specific points. **You cannot simply “cut and paste” wording or text from source material to artificially “construct” their papers, essays, and other assignments. This practice is also considered plagiarism, even if references are done properly.**

Likewise, you must not submit work under their name that you did not do yourselves. You also may not submit work for this course that you produced for another course. If you are found to be cheating in any capacity including plagiarism and collusion, you will be subject to disciplinary action, per UTEP catalog policy. Cases of academic dishonesty will be sent to the Office of Student Conduct and Conflict Resolution for adjudication and possible sanctions. Possible penalties for academic dishonesty include a zero for the assignment, a failing grade for the course, suspension, and even expulsion from the university. You are responsible for understanding your specific obligations to maintain academic integrity at all times. Please refer to the following link for further information on UTEP’s policies on plagiarism and academic dishonesty: <http://sa.utep.edu/osccr/academic-integrity/>.

XI. STUDENTS WITH SPECIAL NEEDS

The University is committed to providing reasonable accommodations to students with documented disabilities. Students who become pregnant may also request reasonable accommodations, in accordance with state and federal laws and regulations and University policy. Accommodations that constitute undue hardship are not reasonable. To make a request, please register with the UTEP Center for Accommodations and Support Services (CASS). Contact CASS at 915-747-5148, email them at cass@utep.edu, or apply for accommodations online via the CASS portal.

XII. COURSE DROP POLICY

If unforeseen circumstances happen where a drop is necessary, you are responsible for initiating any course drop. It is your responsibility to determine how dropping courses may affect financial aid. **Some students are limited in the number of courses they may drop over their entire academic career of all courses taken at any public college or University in Texas.**

If a course is dropped before the “official census date,” the course will not appear on the transcript, and doesn’t count toward the drop limit.

Dropping a course after the official census date, but before the “course drop date” will generate a “W” in the course—although the drop shows on your transcript, a “W” does not lower your GPA. However, a “W” counts against your drop limit.

If the course is dropped after the “course drop date” or if you just stop participating, taking tests, etc., UTEP requires the instructor to issue an “F” in the course that permanently remains on the transcript.

I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please let me know and then contact the Registrar’s Office to initiate the drop process. If you do not, you are at risk of receiving an “F” for the course.

XIII. STUDENT CONDUCT

You must be respectful of other students and of all opinions. All communication should be free of vulgar, offensive, and/or discriminatory language. While it is appropriate to share your opinion on particular issues, your opinion should be presented as such (not as a fact) and should be supported by valid, factual arguments. You may also provide constructive criticism of other opinions. Constructive criticism is provided respectfully and professionally, criticizing the merit of the arguments or the veracity of the facts not the person.

Cell phones should not be used in class without the permission of the instructor. You should attend to the instructor during class lectures. If you are disruptive to the class, you will be asked to leave. You must obtain the instructor’s permission to record lectures. Laptops are allowed during class for taking notes or to aid in classroom exercises. If you use a laptop for other purposes, you will be asked to put it away.

According to University policy, “The Texas Department of Public Safety defines a concealed handgun as a handgun, the presence of which is not openly discernible to the ordinary observation of a reasonable person. This same definition is utilized at UTEP. At all times, the handgun must be on or about the license holder’s body or secured and concealed safely.” This means that handguns may not be openly displayed on campus.

You should ensure that all emailed communication is written using appropriate etiquette. Please use a salutation (for example, “Dear Dr. Duke”, or “Hello Dr. Duke”), a clear and thorough communication of your question or concern, and a closing (for example, “Thanks, Bill Martinez” or “Sincerely, Angel Gomez”). Make sure to proofread your emails for grammar, spelling, and clear meaning. Also, please be sure to indicate the course title or number in your email.

XIV. ABSENCE POLICY

Please do not come to class if you are displaying symptoms of COVID-19, have tested positive for COVID-19, or have been exposed to someone who has tested positive for COVID-19. If any of these events occur, you must inform me as soon as possible. In the absence of these events, you are expected to attend all but three class periods.

Any absences beyond three will affect your class participation grade, even if you are sick or experience some other kind of emergency. You are allowed to participate in class via Zoom if you are sick; this will not count as an absence. If you must be absent, you must inform me as soon as possible; you will be allowed to make up the coursework if you have fewer than two absences. You must review the slides for that class, try to obtain notes from a classmate to learn more about the mini lecture, review the key concepts, and read the case analysis discussion questions.

Class materials will be available on Blackboard. If you must miss class, you are responsible for reviewing this information and for obtaining any further information about the missed class from your classmates.

XV. UTEP EDGE STATEMENT

The UTEP Edge is our philosophy that acknowledges the many assets our students bring to the University. We provide a variety of high-impact experiences both in and out of the classroom through work of our faculty, staff, alumni, and community partners that build on these assets and talents. Many of the assignments and discussions in this class will further develop the talents you bring to this class such as developing your communication skills, teamwork, critical thinking, research, and problem solving. These skills will be developed through consumption of class content, completing critiques of research studies, and milestones towards your research proposal.

Mastery of these skills will be demonstrated through exams, quizzes, classroom exercises, and the written report of your data analysis papers. Some of these assignments, such as understanding and critiquing research studies, are related to more general intelligence analysis skills that you will gain in INSS 5305 Introduction to Intelligence Analysis. Finally, statistical analysis may be necessary to complete INSS 5398/5399 Thesis or CRIJ 5397/5399.

XVI. ADDITIONAL RESOURCES

XVII. UTEP provides a variety of student services and support. Please refer to the QR code below for a listing of campus resources.



XVIII. CLASS CALENDAR***Week 1: 1/16-1/18*****Introduction to Statistics***

Chapter 1

Week 2: 1/23-1/25***Measurement, Percentages, and Index Numbers***

Chapter 2

Public Opinion of the Intelligence Community

Due 1/29: Week 2 Quiz**Week 3: 1/30 – 2/1*****Visual Displays of Data***

Chapter 3

Fair, C. C. (2013). Insights from a database of Lashkar-e-Taiba and Hizb-ul-Mujahideen militants. *Journal of Strategic Studies*, 37, 259-290.

Due 2/5: Week 3 Quiz**Extra Credit****Weeks 4 - 5: 2/6-2/15*****Describing Data***

Chapter 4

Due 2/19: Week 4/5 Quiz**Extra Credit****Data Analysis Paper 1****Week 6: 2/20-2/22*****The Normal Distribution***

Chapter 5

Due 2/26: Week 6 Quiz

Weeks 7 - 8: 2/27 – 3/7
Probability in Statistics

Chapter 6

Mandel, D. R., & Irwin, D. (2021). Uncertainty, intelligence, and national decisionmaking.
International Journal of Intelligence and Counterintelligence, 34, 558-582.

Due 3/18: Week 7/8 Quiz

Week 9: 3/12 – 3/14
No Class-Spring Break

Week 10: 3/19 – 3/21
Review and Exam 1

Due 3/21: Exam 1 (4:30 – 5:50 pm)

Week 11: 3/26 – 3/28
Bayes Theorem

Spiegelhalter, Chapter 11

Nicholas Schweitzer (1978) Bayesian analysis for intelligence: Some focus on the middle east,
International Interactions, 4:3, 247-263, DOI: 10.1080/03050627808434492

Due 4/1: Week 11 Quiz
Data Analysis Paper 2

Week 12: 4/2 – 4/4
Correlation

Chapter 7

Due 4/8: Week 12 Quiz
Extra Credit

Week 13: 4/9 – 4/11
Inferences from Samples to Populations

Chapter 8

Due 4/15: Week 13 Quiz
Extra Credit
Data Analysis Paper 3

Week 14: 4/16 – 4/18
Hypothesis Testing

Chapter 9

Due 4/22: Week 14 Quiz
Extra Credit

Week 15: 4/23 – 4/25
t-tests

Chapter 10

Due 4/29: Week 15 Quiz
Extra Credit

Week 16: 4/30 – 5/2
Presenting Statistical Data

Informative presentation of tables, graphs, and statistics. The University of Reading Statistical Services Center.

Nieminen, P. (2020). Ten points for high-quality statistical reporting and data presentation. *Applied Sciences*, 10, 3885. Doi: 10.3390/app10113885

Due 5/6: Week 16 Quiz
Data Analysis Paper 4

Week 17: 5/7

Due 5/7: Exam 2 (4:00 – 6:45 pm)

* This calendar is subject to change.