CED 697 – APPLIED STATISTICS FOR THE DISSERTATION IN PRACTICE (CPED-ALIGNED)

COURSE SYLLABUS: Spring 2026

INSTRUCTOR INFORMATION

Instructor: Professor Kriss Y. Kemp-Graham, PhD
Office Hours: Virtual (Online)
Office Phone: 903-886-5520
Office Fax: 903-886-5507
University Email Address: kriss.kemp-graham@etamu.edu
Form of Communication: email Communication Response Time: 24 hours or less

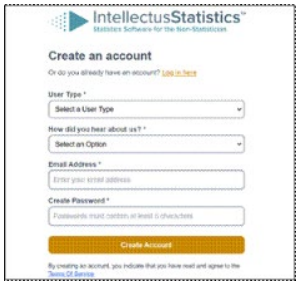
Required Text
Statistics for People Who (Think They) Hate Statistics (2025) Eighth Edition
Neil Joseph Salkind & Bruce B. Frey
ISBN: 9781071855508
August, 2025 | SAGE Publications, Inc

Required Software
Intellectus

Intellectus Purchase and Login Instructions

1. Go to https://my.intellectus360.com/signup

2. Complete and submit the account creation form



3. Click the *Intellectus Statistics* tile

4. On the next page, click the link titled "Activate a Product Key" (below the video and blue box, in purple lettering)

5. Enter product key EastTexas6 (6-mo license) or EastTexas12 (12-mo license) and click the submit button.

6. Login here: https://my.intellectus360.com/login

COURSE DESCRIPTION

This doctoral-level course is grounded in the Carnegie Project on the Education Doctorate (CPED) framework and prepares practitioner-scholars to leverage applied statistics in service of the Dissertation in Practice (DiP). Students engage with authentic educational datasets to apply descriptive, correlational, inferential, and nonparametric methods to Problems of Practice (PoPs) across Educational Leadership (EDL), Curriculum & Instruction (CI), and Higher Education (HE) contexts.

This course emphasizes application, interpretation, and professional judgment rather than computational perfection. Statistical software (Intellectus) is used to perform calculations; however, the central responsibility of the practitioner-scholar is to understand what the data represent, interpret results accurately, and translate findings into actionable, practitioner-appropriate insights that inform decision-making. Students learn to explain statistical results clearly for non-technical audiences, consider limitations and implications for educational opportunity and outcomes, and make evidence-informed recommendations connected directly to their PoPs.

Anchored in improvement science and guided by Plan–Do–Study–Act (PDSA) cycles, the course prepares students to use data iteratively to test, refine, and strengthen instructional and organizational interventions. Above all, the course foregrounds a commitment to excellence for all learners, equipping practitioner-scholars to use data responsibly to identify opportunity gaps, interrogate systems, and design practices that improve outcomes across EDL, CI, and HE settings.

SYLLABUS MODIFICATION STATEMENT

The instructor reserves the right to make reasonable modifications to this syllabus as necessary to enhance student learning, respond to instructional needs, or accommodate institutional, programmatic, or professional considerations. Any substantive changes—including adjustments to assignments, schedules, or assessment requirements—will be communicated to students in a timely manner through official course communication channels (e.g., D2L announcements and/or university email).

Students are responsible for monitoring course communications to remain informed of any updates

LEARNING OBJECTIVES AND OUTCOMES

COURSE LEARNING OBJECTIVES (CLOS)

- ✓ By the end of this course, doctoral practitioner-scholars will be able to:
- ✓ Frame statistical inquiry within Problems of Practice (PoPs) relevant to Educational Leadership (EDL), Curriculum & Instruction (CI), and Higher Education (HE).
- ✓ Apply statistical reasoning (descriptive, correlational, inferential, and nonparametric) to authentic educational datasets in ways that inform practice.

- ✓ Integrate statistical findings into inquiry cycles (Plan–Do–Study–Act) to support continuous improvement and evidence-based decision-making.
- ✓ Interpret statistical results for professional audiences in leadership, curriculum, and higher education, emphasizing actionable meaning over computation.
- ✓ Demonstrate practitioner-scholarship by translating statistical outcomes into recommendations that advance teaching, learning, and organizational effectiveness.

STUDENT LEARNING OUTCOMES (SLOS)

Upon successful completion of this course, students will be able to:

- ✓ Frame statistical inquiry within a Problem of Practice (PoP).
- ✓ Apply descriptive, correlational, inferential, regression, and nonparametric methods to educational data.
- ✓ Interpret statistical findings in plain language for leadership, curriculum, and higher education audiences.
- ✓ Integrate statistical evidence into inquiry cycles (Plan–Do–Study–Act) to inform continuous improvement.
- ✓ Evaluate reliability and validity evidence for education instruments and datasets.
- ✓ Communicate results using APA 7th edition tables, figures, and narrative write-ups.
- ✓ Adopt a practitioner-scholar stance to promote excellence for all learners and improved outcomes for all student populations across EDL, CI, and HE contexts.

COURSE REQUIREMENTS

Minimal Technical Skills Needed
- Navigate D2L (access modules, upload assignments, review feedback).

- Use Intellectus Statistics (import CSV/Excel, run analyses, export APA tables/figures).
- Prepare APA-formatted documents in Word; handle basic Excel/CSV tasks.

Instructional Methods
- Applied, case-based learning aligned to Salkind's text.
- Inquiry-driven assignments connecting methods to students' PoPs.
- Technology-enhanced analysis in Intellectus Statistics.
- Collaborative peer feedback and workshopping.

Student Responsibilities or Tips for Success in the Course
- Complete readings prior to assignments and connect all analyses to your PoP.
- Engage actively with datasets and ask questions early about interpretation/APA.
- Participate in peer review and submit on-time work unless pre-approved.

GRADING

Final grades in this course will be based on the following scale:

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

Weights of the assessments in the calculation of the final letter grade.

Evidenced Based Inquiry Brief (7)—50%
Sensemaking (7)—30%
Final Project --20%
TOTAL — 100%

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Video Conferencing Tool
https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a East Texas A&M University campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

TECHNICAL SUPPORT

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

INTERACTION WITH INSTRUCTOR STATEMENT

I typically respond to D2L/email messages within 48 hours (Mon–Fri). Assignment feedback is

provided within one week. If you are struggling with Intellectus, APA formatting, or interpretation, please reach out early to schedule a meeting.

COURSE SPECIFIC PROCEDURES/POLICIES

SYLLABUS CHANGE POLICY

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

UNIVERSITY SPECIFIC PROCEDURES

STUDENT CONDUCT

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
https://inside.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf.

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: https://www.britannica.com/topic/netiquette

EAST TEXAS A&M UNIVERSITY ATTENDANCE

For more information about the attendance policy please visit the Attendance webpage and Procedures 13.99.99.R0.01
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

ACADEMIC INTEGRITY

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03
Undergraduate Student Academic Dishonesty Form

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf

Graduate Students Academic Integrity Policy and Form

Graduate Student Academic Dishonesty Form

https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10.pdf

STUDENTS WITH DISABILITIES-- ADA STATEMENT

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu

Website: Student Disability Services

https://www.tamuc.edu/student-disability-services/

NONDISCRIMINATION NOTICE

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

CAMPUS CONCEALED CARRY STATEMENT

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and East Texas A&M University Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.
Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

EAST TEXAS A&M UNIVERSITY SUPPORTS STUDENTS' MENTAL HEALTH

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Mental Health and Well-Being
The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.

http://telusproduction.com/app/5108.html

AI USE POLICY

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.
13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

Course Artificial Intelligence (AI) Use Policy
Purpose and Guiding Principle

This course prepares practitioner-scholars to use evidence to inform instructional improvement and decision-making. Artificial Intelligence (AI) tools (e.g., ChatGPT, Copilot, Grammarly, Intellectus AI features) may be used in this course as a cognitive support tool, not as a substitute for original thinking, analysis, or professional judgment.

Consistent with CPED principles, students are expected to remain the primary authors and decision-makers for all submitted work.

Permitted Uses of AI
Students may use AI for the following purposes with proper documentation:

- Brainstorming ideas or refining a Problem of Practice
- Clarifying statistical concepts in plain language
- Rewriting or revising text for clarity, organization, or practitioner audiences
- Generating alternative ways to explain results to non-technical stakeholders
- Assisting with formatting, grammar, or tone
- Checking understanding of Intellectus output (not generating results)

AI may be used as a thinking partner, editor, or explainer—but not as the author of the work.

Prohibited Uses of AI
The following uses are not permitted in this course:

- Submitting AI-generated text as original work without disclosure
- Using AI to fabricate data, results, interpretations, or references
- Using AI to complete entire assignments or Problem of Practice artifacts
- Using AI to generate practitioner recommendations without your own analysis
- Uploading course datasets or proprietary materials into external AI tools if restricted by the instructor or institution

Students are fully responsible for the accuracy, integrity, and appropriateness of all submitted work, regardless of AI use.

Documentation Requirement (Mandatory)

Any use of AI must be documented in a brief disclosure statement included at the end of each assignment.

AI Use Disclosure Statement (Required)

Students must include a short statement such as:
"I used ChatGPT to help clarify the interpretation of statistical output and to revise language for a practitioner audience. All analysis, conclusions, and recommendations reflect my own judgment."

If AI was not used, students should state:
"No AI tools were used in the completion of this assignment."
Failure to include an AI Use Disclosure Statement will be treated as undocumented AI use.

Evaluation of AI-Assisted Work
Assignments will be evaluated on:

- Accuracy of interpretation
- Depth of analysis
- Alignment with the Problem of Practice
- Quality of practitioner explanation
- Feasibility and appropriateness of instructional recommendations

Use of AI does not increase or decrease grades; undocumented or inappropriate use may result in:

- Required resubmission
- A zero on the assignment
- Referral under the Graduate Student Academic Dishonesty policy, as applicable

Professional Expectation
As doctoral-level practitioner-scholars, students are expected to use AI ethically, transparently, and responsibly, consistent with professional standards in education, leadership, and research. The goal of this course is not to avoid AI, but to learn how to use it thoughtfully in service of evidence-informed instructional improvement.

SYLLABUS MODIFICATION STATEMENT

The instructor reserves the right to make reasonable modifications to this syllabus as necessary to enhance student learning, respond to instructional needs, or accommodate institutional, programmatic, or professional considerations. Any substantive changes—including adjustments to assignments, schedules, or assessment requirements—will be communicated to students in a timely manner through official course communication channels (e.g., D2L announcements and/or university email).
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COURSE OUTLINE / CALENDAR

Module 1 (Weeks 1–2)
Framing Problems of Practice & Describing Data
Textbook

- Ch. 1, Ch. 2

Assignments (Due end of Week 2)

- Evidence-Based Inquiry Brief #1: Framing a Problem of Practice Through Descriptive Evidence
- Sensemaking Reflection #1: What Is "Typical," and Who Decides?

Module 2 (Weeks 3–4)
Examining Relationships Without Overclaiming
Textbook

- Ch. 3

Assignments (Due end of Week 4)

- Evidence-Based Inquiry Brief #2: Exploring Relationships and Avoiding Causal Claims
- Sensemaking Reflection #2: When Patterns Mislead

Module 3 (Weeks 5–6)
Evaluating the Quality of Evidence
Textbook

- Ch. 4

Assignments (Due end of Week 6)

- Evidence-Based Inquiry Brief #3: Assessing Reliability and Validity in Practice
- Sensemaking Reflection #3: Trust, Credibility, and Repeated Claims

Module 4 (Weeks 7–8)
Reasoning Under Uncertainty
Textbook

- Ch. 5, Ch. 6

Assignments (Due end of Week 8)

- Evidence-Based Inquiry Brief #4: Using the Normal Curve and Hypothesis Testing Responsibly
- Sensemaking Reflection #4: Partial Evidence and Incomplete Understanding

Module 5 (Weeks 9–10)
Statistical Significance vs. Practical Meaning
Textbook

- Ch. 7

Assignments (Due end of Week 10)

- Evidence-Based Inquiry Brief #5: Interpreting Significance in Context
- Sensemaking Reflection #5: When "Evidence" Goes Unchallenged

Module 6 (Weeks 11–12)
Comparing Groups Responsibly
Textbook

- Ch. 8, Ch. 9

Assignments (Due end of Week 12)

- Evidence-Based Inquiry Brief #6: Comparing Groups Through an Equity Lens
- Sensemaking Reflection #6: Short-Term Differences vs. Long-Term Outcomes

Module 7 (Weeks 13–14)
Evidence in Complex Systems
Textbook

- Ch. 10, Ch. 12

Assignments (Due end of Week 14)

- Evidence-Based Inquiry Brief #7: Examining System-Level Variation and Relationships
- Sensemaking Reflection #7: Collective Contribution and Shared Outcomes

Module 8 (Weeks 15–16)

From Evidence to Action
Textbook

- Review Ch. 1–12 (as applicable)

Assignments (Due end of Week 16)

- Final Evidence-to-Action Synthesis Brief
- Sensemaking Reflection #8: Integrating Evidence and Judgment

Evidence-Based Inquiry Briefs and Sensemaking Reflections are designed to support CPED-aligned scholar–practitioner development by emphasizing interpretation, judgment, and improvement-oriented use of evidence. Statistical methodologies are applied within discipline-specific contexts to inform Problems of Practice rather than to demonstrate procedural mastery.