EDUR 8131
Educational Statistics I
Fall 2023
Bryan W. Griffin

Office Information

Contact Hours

Varies for on-line courses, therefore it is best to contact me electronically to arrange an appointment.

E-Mail

Use Folio mail to contact me. If Folio is not working, my regular e-mail address is
bwgriffin@GeorgiaSouthern.edu, but please use Folio for course-related communications.

Mail

Department of Curriculum, Foundations, and Reading
P.O. Box 8144
College of Education
Georgia Southern University
Statesboro, GA 30460

Catalogue Description of EDUR 8131

Topics covered in this course include central tendency, variability, distributions, correlation, significance testing, t-tests, linear regression and chi-square analysis. Emphasis is placed on application of statistics in educational research situations. Prerequisite: EDUR 7130 or equivalent or permission of instructor.

Course Material

Supplemental Text

Moore, D., McCabe, G., & Craig, B.A. (2006, 2009, 2012, 2015). Introduction to the practice of statistics (5th, 6th, 7th ed. or 8th acceptable). New York: Freeman.

There is little difference among the 5th, 6th, 7th and 8th editions, so select whichever edition you find as the best bargain. Note that 5th through 7th editions may be found on-line for less than $10, maybe even near $0. Try searching online by title, or for ISBN 0716764008 on google.com shopping, www.amazon.com, or www.alibris.com, for example.

Much of the content taught in this course can be found on the course web site, linked below.

Course Web Site

The course web site contains detailed topic notes, activities, supplemental reading, video and static tutorials, example statistical presentations, and course announcements. The site may be found at the following address (select the relevant semester link):

http://www.bwgriffin.com/gsu/courses/edur8131

Software

Two options, SPSS (rent for about $45) or JASP (free). SPSS has been used at Georgia Southern for decades and is the version I use in instructional videos. JASP is relatively new and does not appear in my instructional videos, however, I developed supplemental videos showing how to use JASP for the analyses performed in this course. Select whichever option seems best for you.

(a) SPSS Version 10.0 or higher

    The latest version IBM/SPSS Statistics Base for Windows can be rented for 6 months for about $35 from this site (cost is higher for MAC version).
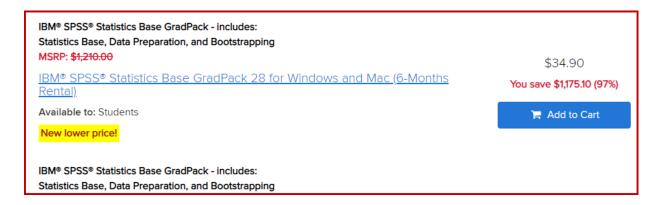
    http://www.onthehub.com/spss

    Other sources to rent SPSS may be found linked below.

    https://www.ibm.com/products/spss-statistics-gradpack

    Many students who purchase MAC versions of SPSS have complained of installation and run issues. I recommend buying only the Windows version and using a Windows computer for data analysis.

    Buy the version highlighted in the screen capture below.

IBM® SPSS® Statistics Base GradPack - includes:
Statistics Base, Data Preparation, and Bootstrapping
MSRP: $1,210.00

IBM® SPSS® Statistics Base GradPack 28 for Windows and Mac (6-Months Rental)

Available to: Students

New lower price!

$34.90
You save $1,175.10 (97%)

🛒 Add to Cart

IBM® SPSS® Statistics Base GradPack - includes:
Statistics Base, Data Preparation, and Bootstrapping

(b) JASP

    JASP can be downloaded from this site.

    https://jasp-stats.org

Versions are available for Windows, MAC, Linux, and browser online.

If you experience difficulties with installation, I cannot help. You may be able to identify solutions via online searches or JASP support page.

To find JASP in browser mode, go to this page and scroll past the download section.

https://jasp-stats.org/download

(c) Jamovi

I have no instructional videos for Jamovi, however, it is similar to JASP and can be run in a browser so nothing to download. A number of menus and commands overlap with JASP so see JAPS videos for general guidance.

https://cloud.jamovi.org

Course Content and Objectives

Content Covered (see Course Index and Course Calendar on the course web site for assigned readings, supplemental readings, and date topics are covered: http://www.bwgriffin.com/gsu/courses/edur8131)

1. Measurement (scales, variables)
2. Hypotheses: Written & Symbolic
3. Descriptive Statistics: Central Tendency & Variability
4. Displaying Data
5. Normal Curve
6. Percentile Ranks & Standard Scores
7. Logic of Statistical Inference & Hypothesis Testing
8. t-test: One Sample, Independent Samples, Correlated Samples
9. Pearson's Correlation
10. Chi-square: Goodness of fit, Test of Association
11. Regression: Simple and Multiple with Quantitative Predictors
12. One-way ANOVA & Multiple Comparisons

Following presentation of the above content, students should be able to analyze simple and some complex data using, as appropriate, the various statistical modeling procedures covered; perform these analyses in relevant statistical software (e.g., SPSS); read and interpret results based upon statistical modeling procedures examined; and produce APA (American Psychological Association) styled output for reports with corresponding written inference and interpretation.

Course Calendar

Given that the course calendar may change weekly subject to the pace of content coverage, the course calendar is not listed here, however a detailed and current calendar can be found at the Course Web Site, linked below:

http://www.bwgriffin.com/gsu/courses/edur8131

Content Delivery

This course is taught by a combination of recorded instructional video presentations, content notes, chat notes, and other on-line content. Optional live chats may be offered for those interested. A forum discussion board will be used to enable questions and answer sessions, and to post announcements.

Grading, Assessments, and Course Activities

There will be six grading opportunities during the term based upon three tests. For each test, there will be two versions, the original and an alternate. Everyone may complete both versions, or may complete only one version, the original or alternate. I recommend everyone complete the original test, then use the graded original and answer key as a study guide to complete the alternate version. This allows folks the possibility of increasing their test grade. The table below illustrates the grading opportunities.

Original Test	Alternate Test	Course Grade Determination
Test 1	Alternate Test 1	The higher score of Test 1 or Alt Test 1 will be used.
Test 2	Alternate Test 2	The higher score of Test 2 or Alt Test 2 will be used.
Test 3	Alternate Test 3	The higher score of Test 3 or Alt Test 3 will be used.

Each test will focus on conceptual components of statistical analysis, computer applications, choice of statistical procedures, and written results and interpretations. Tests will be posted early in the semester so plenty of time is available for completion.

Each test will be weighted equally at 1/3 of the final grade. Final course grades will the mean score for Tests 1, 2, or 3 (or alternate test score if those are higher). Final grades will be assigned based on the following table.

90 and above	= A
80 to less than 89.999	= B
70 to less than 79.999	= C
60 to less than 69.999	= D
59.999 and below	= F

Should you not provide responses to a missed test before the end of the term, an IP (in progress) will be assigned as your final course grade and will remain until all missed tests are completed.

If you fail to complete Test 3 on the scheduled date, you may complete the alternate Test 3 during a time that is convenient for the instructor. Contact the instructor at the end of the semester to obtain alternate Test 3. Tests cannot be taken early.

In addition to the graded tests, other non-graded activities will be available. These activities include analysis of data and reporting of statistical results, numerous computer replications of examples from assigned readings and course notes, and out-of-class exercises. These activities are designed to facilitate learning of course content.

Attendance

You may come and go as you please during class or chat sessions; attendance is not recorded or required in EDUR 8131 except for verification purposes at the outset of the semester.

Withdrawing from Class

The university sets a specific date in which you may withdraw from a course without an academic penalty. On rare occasions students wish to withdraw after the university deadline. This may be possible - contact the registrar's office to learn which forms are needed to petition for a withdraw after the university deadline has passed.

How This Course Supports the College's Conceptual Framework

The College of Education's conceptual framework advances the theme of reflective educators for diverse learners. This includes, for example, commitments to technology and to knowledge and dispositions of the profession. In this course information will be learned that should make each student educator a more knowledgeable and critical consumer of educational research, thus enabling educators to evaluate better current and recommended practices when analyzed empirically. In addition, the statistical and data analytic skills presented in this course will able student educators to become producers of educational research and this will enable educators to employ empirical means to study their own classroom and school practices through action research.

Academic Integrity Expectations

Students are expected to abide by the GSU Student Conduct Code and Regulations regarding academic integrity. Academic misconduct such as cheating, collaborating on tests when prohibited, and plagiarism will be reported to the Office of Judicial Affairs and appropriate penalties imposed that could affect course grade, such as a grade of zero on the targeted activity or test. See GSU's *Student Conduct Code* for relevant details.

ADA Accommodations

In compliance with the Americans with Disabilities Act (ADA), this course will honor requests for reasonable accommodations made by individuals with disabilities or demonstrating appropriate need for learning environment adjustments. Students must self-disclose their disability to the Student Accessibility Resource Center (SARC) before academic accommodations can be implemented. Students requesting alternative educational arrangements must submit a completed COVID-19 Alternative Educational Arrangement Request Form to the SARC office. For additional information, please call the SARC office at (912) 478-1566 on the Statesboro campus, or at (912) 344-2572 on the Armstrong and Liberty campuses.

Artificial Intelligence Usage

GSU stance on use of AI in courses: "I expect you to generate your own work in this class. Any work submitted infers the assertion that you have generated and written the text, unless stated otherwise by proper quotation and attribution methods. Submitting content that was generated by someone else, or that was created or assisted by a computer application or tool, including artificial intelligence (AI) tools such as ChatGPT, is cheating and constitutes a violation of the Student Conduct Code. You may use simple word processing tools to update grammar in your work, but you may not use AI tools to draft your assignments, even if you edit, revise, or

paraphrase it. There may be opportunities for you to use AI tools in this class, but I will clearly specify when and in what capacity if the opportunity presents itself."