



**EDUR 8131**  
**Educational Statistics I**  
**Summer 2021**

**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](mailto:bwgriffin@GeorgiaSouthern.edu), but please use Folio for course-related communications.

**Mail**

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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 8<sup>th</sup> acceptable). New York: Freeman.

There is little difference among the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> 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 \$40 from this site (cost is higher for MAC version):

<http://www.onthehub.com/spss>

Other sources to rent SPSS may be found linked below, and some may be less expensive:

<https://www.ibm.com/us-en/marketplace/spss-statistics-gradpack/details>

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 27

Use IBM SPSS Statistics to solve business and research problems by means of ad hoc analysis, hypothesis testing, geospatial analysis, and predictive analytics. 6- or 12-month rental licenses available to verified students and faculty. Available for Windows and Mac.

**\$39.95 USD** – Students Save 97%

**\$259.99 USD** – Faculty Save 78%

Students buy now      Faculty buy now

(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.

### **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
13. ~~One-way ANCOVA & Multiple Comparisons (may not be covered this semester)~~

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 be 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 enable 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.