



EDUR 8131
Educational Statistics I
Spring 2020

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 \$43 from this site (cost is higher for MAC version):

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

Other sources to purchase 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.

MSRP: \$1,210.00	
IBM® SPSS® Statistics Base GradPack 25 for Windows (06-Mo Rental)	\$42.99
Available to: Students	You save \$1,167.01 (96%)
Platforms: Windows	Add to Cart
IBM® SPSS® Statistics Base GradPack - includes: Statistics Base.	
MSRP: \$1,210.00	\$65.99

(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 three tests administered during the term. 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 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

If you are unable to complete Tests 1 or 2 in the time allotted, alternate tests will be made available. Anyone may complete alternate Tests 1 and 2. If alternate Tests 1 or 2 grades are higher, those grades will replace original Test 1 and 2 grades.

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 an 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.

Disability Accommodations

If a student has a documented and declared disability, reasonable accommodations will be provided if requested by the student according to the recommendations of the GSU Disabled Student Services office.