



EDUR 9131
Doctoral Research Methods
Spring 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 email 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 9131

The purpose of this course is for doctoral-level students to gain a firm foundation in educational research prior to enrollment in the more specialized courses in quantitative methods. Students engage in an applied research project that updates their understanding of research procedures (hypothesis generation, sampling theory, instrument construction, measurement concepts and descriptive and inferential statistics). Emphasis is on the “hands-on” application of advanced inquiry skills. Prerequisite(s): EDUR 7130 and EDUR 8131 or equivalent courses.

Course Material

Text (not required, but recommended)

de Vaus, D. A. (6th or 5th edition). *Surveys in Social Research*. Taylor & Francis.

ISBN numbers for paperback editions:

6th = 9780415530187 (\$30 to \$50)

5th = 0415268583 (\$5 to \$10)

Note that a used 6th edition may be found on-line for less than \$45, 5th for less than \$15. Try searching with the ISBN on abebooks.com, google.com, www.amazon.com, or www.alibris.com, for example. Electronic versions are also available.

Course Web Site

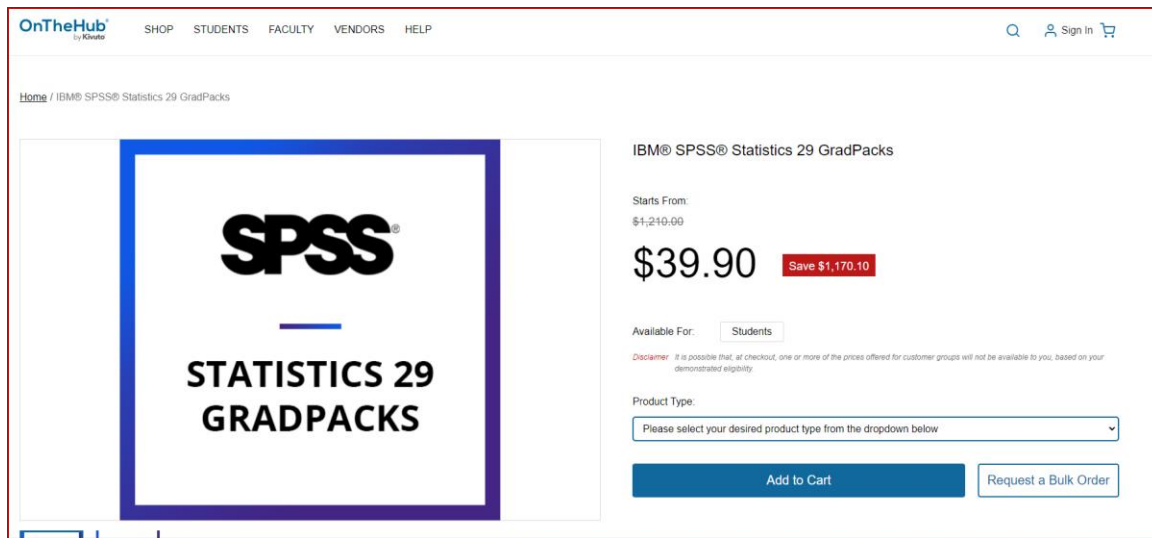
The course web site contains detailed topic notes, activities, supplemental reading, video and statistics tutorials, and course announcements. The site may be found at the following address.

<http://www.bwgriffin.com/gsu/courses/edur9131>

Software

SPSS will be used in this course. Both instructional notes and videos make use of SPSS, and it will be used during on-campus meetings. The most recent version can be found and rented here for ~\$40 for 6 months:

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



Other student options and pricing for SPSS can be found linked below.

http://www.spss.com/vertical_markets/education/online.htm

Georgia Southern may also offer a version that can be used via the internet. See the link below for virtual lab options. I cannot help in any way with this option. Often students report a clunky experience using SPSS through the vlab.

<https://its.georgiasouthern.edu/virtuallab/>

Course Content and Objectives

Content Covered (tentative and subject to revision; see Course Index and Course Calendar on the course web site for current course content, assigned and supplemental readings, and date topics are covered:

<http://www.bwgriffin.com/gsu/courses/edur9131>)

1. Introductory Review
 - a. Format of a Research Report (APA Style)
 - b. Variables and Scales of Measurement
 - c. Purpose Statements, Research Questions, Hypotheses
 - d. Literature Search Mechanics
 - e. Descriptive Statistics and Graphical Displays
 - f. Logic of Hypothesis Testing, Type 1 and 2 Errors, p-values
 - g. Pearson correlation
 - h. t-tests

- i. ANOVA
- j. Regression
- 2. Questionnaire Selection and Development
 - a. Types of Items, Questionnaire Layout
 - b. Searching for Developed Questionnaires/Scales
 - c. Reading Factor Analysis Results (for item selection)
 - d. Questionnaire/Scale Development and Construction
 - e. Content Validity and Item Development
 - f. Reliability and Item Analysis
 - g. Construct Validity
 - h. Presentation of Evidence for Content, Reliability, and Construct Validity
 - i. Composite Scores and Reverse Scoring
 - j. Electronic Questionnaire Development
- 3. Sample Size Determination
 - a. Effect Sizes
 - b. Categorical Responses
 - c. Group Comparisons (ANOVA type models)
 - d. Correlations
 - e. Regression Models
- 4. Analysis of Responses to Open-ended Items
 - a. Developing Coding Sheet
 - b. Content Analysis
 - c. Assessing Coder Agreement/Reliability
 - d. Percentage Agreement, Kappa, and others
- 5. Statistical Analysis: Factor Analysis with SPSS
 - a. Logic of Factor Analysis via Correlations
 - b. Communality Estimation Choice
 - c. Factor Determination, Parallel Analysis
 - d. Factor Rotation
 - e. Factor Loadings/Scores and Interpretation

Following presentation of the above content students should be able to develop questionnaires that align to research questions and are content valid, provide evidence for reliability and validity for data obtained from questionnaires, select appropriate sample sizes for different types of statistical analyses, and analyze data and present results from various types of questionnaire data.

Course Calendar

A current calendar with any announcements to highlighted changes can be found at the course web page:

<http://www.bwgriffin.com/gsu/courses/edur9131>

Content Delivery

This course is taught both in person and on-line. There will optional, live video chats weekly.

Grading, Assessments, and Course Activities

There will be three tests and a research activity. The tests are developed to match content covered and are take-home, open book style. Tests are normally posted a few weeks or so before responses are due so students have ample time to complete each test.

The research activity requires students to construct a questionnaire on variables assigned by the instructor, administer those questionnaires, perform item analysis and validity assessment, and then provide a statistical analysis of the variable model presented.

Class projects and Georgia Southern's Institutional Review Board (IRB)

The criteria below are followed to meet IRB guidelines for class projects:

- No minors
- No more risk than minimal
- No deception
- No publication or presentation of findings outside of class and all reports/presentations in class must adequately blind sources so no one respondent can be identified.
- No videotaping

Course grades will be based upon the following items and weights.

- Test 1 = 25%
- Test 2 = 25%
- Test 3 = 25%
- Activity 1 = 25%

There are a number of assignments located on the course web page. These assignments are not graded and therefore do not count toward the final course grade. These assignments are instructional in nature and designed to teach how to execute the content covered so you are better prepared for the course tests and the research activity.

Attendance

You may come and go as you please; attendance is not recorded in EDUR 9131.

Withdrawing from Class

The university sets a specific date in which you may withdraw from a course without an academic penalty. On rare occasions some 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 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.