



**EDUR 9131
Doctoral Research Methods
Spring 2018**

Bryan W. Griffin

Office Information

Contact Hours

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

Telephone Numbers

Office (Room 2128 College of Education Building): No telephone, contact me electronically.
Department of Curriculum, Foundations, and Research: 912-478-5091

E-Mail

Please use Folio email to contact me so all course communications can be recorded and maintained in Folio. If Folio is not working, my regular e-mail address is bwgriffin@GeorgiaSouthern.edu .

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

Required Text

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

ISBN numbers for paperback editions:

6th = 9780415530187

5th = 0415268583

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. The most recent version can be found and rented here for ~\$45 for 6 months:

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

Other student options and pricing for SPSS can be found here:

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

Georgia Southern may also offer a version that can be used via internet. If that is available, a note about SPSS will be posted in Folio.

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
 - f. Logic of Hypothesis Testing, Type 1 and 2 Errors, p-values
 - g. t-test with SPSS Illustration
 - h. Correlation with SPSS Illustration
 - i. Overview of Score Reliability and Validity
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: Review of Correlation and Regression and SPSS
 - a. Pearson Correlation
 - b. Quantitative Predictors
 - c. Qualitative Predictors
 - d. Model fit; Semi-partial Correlation (ΔR^2); Effect Size
 - e. Sample Size Determination
 - f. Reading and Interpreting Published Results
- 6. 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. Their may be optional, live video chats.

Grading, Assessments, and Course Activities

There will be two tests and a group research activity. The tests are developed to match content covered and are take-home, open book style. Tests are normally posted a week or so before responses are due so students have ample time to complete each test. Sample tests can be found on the course web page.

The group research activity requires students to construct a questionnaire on variables assigned by the instructor, administer those questionnaires to students in this course, then prepare and submit a brief report of the results. Details of this assignment can be found on the course web page. In addition, a sample report that shows the structure and detail expected can be found on the course web page. Lastly, group configuration and assigned topics can also be found on the course web page.

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 = 30%
- Test 2 = 35%
- Project 1 (group research activity) = 35%

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 the course tests and the group 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 rear 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 Educations 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 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.