



**EDUR 9131
Doctoral Research Methods
Spring 2015**

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): 912-478-0488

Department of Curriculum, Foundations, and Research: 912-478-5091

Department of Curriculum, Foundations, and Research: 912-478-5382

E-Mail

Use GeorgiaView to contact me. If GeorgiaView is not working, my regular e-mail address is bwgriffin@GeorgiaSouthern.edu, but please use GeorgiaView 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

Required Text

de Vaus, D. A. (2002). *Surveys in Social Research* (5th ed., and 4th or 3rd editions acceptable). Taylor & Francis.

Note that 5th edition may be found on-line for less than \$50. Try searching for ISBN 0415268583 (paperback) or ISBN 0415268575 (hardback) on google.com, www.amazon.com, or www.alibris.com, for example. Electronic versions are also available such as with Amazon’s Kindle.

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 ~\$40 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

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 Development
 - a. Types of Items, Questionnaire Layout
 - b. Content Validity and Item Development
 - c. Reading Factor Analysis Results (for item selection)
 - d. Reliability and Item Analysis
 - e. Construct Validity
 - f. Presentation of Evidence for Content, Reliability, and Construct Validity
3. Sample Size Determination
 - a. Categorical Responses
 - b. Effect Sizes
 - c. Group Comparisons (ANOVA type models)
 - d. Correlations
 - e. Regression Models
4. Analysis of Responses to Open-ended Items
 - a. Developing Codes
 - b. Content Analysis
 - c. Reliability: Inter-rater and Intra-rater
 - d. Percentage Agreement
 - e. Kappa

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 present results from various types of analyses of questionnaire data.

Course Calendar

A current calendar with 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 on-line via reading materials, videos, discussion forums, and live audio/video chat sessions. During live video chat sessions students will be able to see the instructor's computer desktop and hear the instructor. This presentation style is similar to a live white board. Such a presentation requires access with a fast internet connection to prevent connection lag. Each chat session will be recorded, if possible, for later review.

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 open book. Tests are normally posted several days before responses are due so students have ample time to complete each. 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
- IRB guidelines for class projects: <http://tinyurl.com/cyenpu7>

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 various covered. These assignments also prepare you for 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. In this course, however, you may withdraw without an academic penalty (i.e., you will receive a WP) until the last day of regular class (this excludes exam week), no questions asked, no matter what your current performance. My policy of assigning WPs is contingent upon the approval of the CFR department chair and COE Dean (i.e., a WP is not guaranteed).

To withdraw after the drop date, contact the registrar's office to learn what form is needed (it may be called "petition to withdraw" or something similar). Complete that form and submit to me so I may sign and forward to my departmental chair. It may also be possible to withdraw via e-mail—again, contact the registrar's office to learn if possible and how.

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 *Student Conduct Code, Section III* for relevant details.

<http://students.georgiasouthern.edu/judicial/Documents/SCC.pdf>

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.