



EDUR 8331
Applied Measurement
Fall 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

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Statesboro, GA 30460

Catalogue Description of EDUR 8331

This course will introduce concepts and practices in measurement and survey research. Practical applications of measurement – such as interpreting standardized test scores, constructing and administering tests and questionnaires, and producing evidence for validity and reliability – will be included.

Course Material

Required Text

Van Blerkom, M. L. (2009 or 2017; 1st or 2nd ed.). *Measurement and statistics for teachers*. Routledge.

Inexpensive 1st editions may be located with www.bookfinder.com; search with ISBN = 9780415995658.

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/edur8331>

Software

SPSS version 10 or higher.

(a) Free Access

Georgia Southern offers SPSS freely via the vLabs:

<http://its.georgiasouthern.edu/vlab>

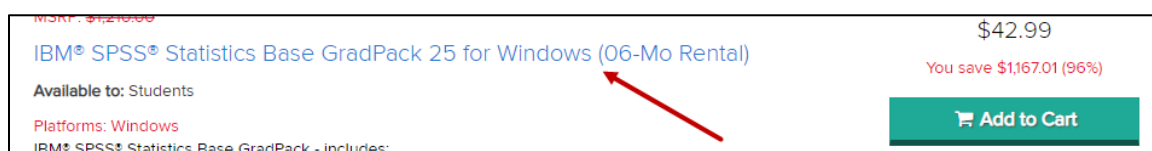
You may find it to be slow in response on occasion. If this is troublesome, consider renting the version that can be installed on your computer for faster response time. Also, I won't be able to provide any technical support for making vLab work - contact GSU for help.

(b) SPSS Rental

For the rental SPSS, the most recent version can be found and rented here for ~\$45 for 6 months:

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

Screen shot of the version to rent appears below.



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.

1. Introductory Review
 - a. Measurement
 - b. Variables and Scales of Measurement
 - c. Descriptive Statistics
 - d. Graphical Displays
 - e. Correlation
 - f. Two-group t-test
2. Reliability and Validity
 - a. Reliability – test-retest, alternate/parallel forms, internal consistency, scorer/rater/judge agreement
 - b. Validity – content, criterion, construct evidence
 - c. Reading Factor Analysis Results (for validity structure assessment and item selection)
3. Classroom Test Construction
 - a. Interpreting Test and Standardized Scores
 - b. Developing Objectives
 - c. Content Validity
 - d. Test Item Development
 - e. Item and Test Analysis
4. Questionnaire Selection and Development
 - a. Searching for Developed Questionnaires/Scales
 - b. Types of Items, Questionnaire Layout
 - 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
- 5. Analysis of Responses to Open-ended Items
 - a. Developing Coding Sheets
 - b. Qualitative Data Analysis and Content Analysis
 - c. Assessing Coder Agreement
- 6. Modern Measurement Introduction
 - a. Rasch Models for Test and Questionnaire Development and Assessment
 - b. Item Response Theory

Following presentation of the above content students should be able to develop tests and questionnaires that are content valid, provide evidence for reliability and validity for data obtained from tests or 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/edur8331>

Content Delivery

Content is provided online via readings and video presentations. Optional live chats are also offered.

Grading, Assessments, and Course Activities

Course grades will be based upon three tests and two activities. The tests are developed to match content covered and are take-home, open book style. Tests will be posted a week or so before responses are due. Briefly described, Activity 1 requires test item development and item analysis, and Activity 2 requires scale development and validity/reliability assessment of scores obtained from the developed scale. Details for both activities will be posted on the course website.

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 (test item construction and assessment) = 10%
- Activity 2 (questionnaire item construction and assessment) = 15%

In addition to graded assignments will be non-graded assignments that are also located on the course web page. These assignments are instructional in nature and designed to teach the specific content covered.

Attendance

You may come and go as you please; attendance is not recorded in EDUR 8331.

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

As noted in the Georgia Southern University Mission statement, one of the institution's hallmarks is to build a culture of engagement that links theory with practice. The course objectives and candidate performance outcomes associated with this course address this critical element. In addition, the course objectives specifically address the four commitments that form the core of the College's conceptual framework:

- **Commitment to the Knowledge and Dispositions of the Profession**
Candidates will learn various ways to measure constructs and outcomes that can be applied in a variety of fields and professions.
- **Commitment to Diversity**
The variety of measurement approaches learned in this course can be used to tailor measurement projects to diverse situations, contexts, and populations.
- **Commitment to Technology**
Candidates will be exposed to various software for data analysis and to web-based tools for collecting survey data.
- **Commitment to the Practice of Continuous Reflection and Assessment**
This course will introduce candidates to measurement techniques that can be used to form assessments through which reflections on practices can be examined.

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.