BACS 512: Single Subject Design
Fall 2015; 4 Credits

Department of Health Professions Mission Statement
Anchored in the pragmatic liberal arts tradition, the department of health professions educates students to become effective and innovative health and behavioral professionals who will satisfy the growing demand for their services.

COURSE INFORMATION

General
Class Time & Location: Tuesdays 6:45-9:15 p.m. in Bush 202
Instructor: Michele Williams, Ph.D., BCBA-D, LBA
Office: Will probably be somewhere in Stewart Hall, or possibly Warren Hall, but right now in my dining room & occasionally in the Bush Atrium. Hey, why not Starbucks?
Phone: 407.646.2036 (Don’t worry, I get voicemails sent to me by email)
E-mail: AMWilliams2@Rollins.edu
Office Hours: Tuesdays/Thursdays 3:30-6:30 p.m. or by appointment (Location TBD!)

Course Description
Course covers single subject experimental and quasi-experimental designs and relevant within-subject statistical and graphing principles. Single subject designs will be contrasted against group designs typically employed in psychological research.

Course Format
The format will be lecture, class discussions, in-class exercises, and student presentations. Like those in other sciences, technical terms and principles in the field of behavior analysis are defined in very precise language. You will be asked to answer exam questions and complete assignments using precise terms. Some of the precision that the technical language achieves is lost when students paraphrase or give personal interpretations, so you should anticipate doing a lot of memorizing for this course. Many students find it helpful to use flash cards while preparing for exams. Transform the study objectives into questions (one question or key term per flash card) and write the answer on the back of the card. Additional suggestions will be provided in class.

Required Text

Required Primary Source Readings
Readings will include a combination of technical articles/primary sources and experimental examples of each research design.


**Course Learning Objectives**

Upon completion of the course, students should be able to:

1. Define, give examples of, and recognize examples and non-examples in published behavior analysis research of baseline logic (prediction, verification, and replication).

2. Critique published behavior analysis research in terms of its research questions, relation to previous research, independent variables, definition and measurement of the dependent variable(s), experimental design elements, special control techniques, graphic presentation of the data, and authors’ conclusions.

3. Describe the requirements, advantages, uses, and limitations of single subject designs, including the withdrawal design, reversal design, multiple baseline designs, changing criterion design, alternating treatments designs, and combinations of any of the above.

4. Define behaviors for measurement and describe methods for measuring those behaviors.
5. Conduct formative and summative evaluations of data using visual inspection procedures, descriptive statistics, and inferential statistics.
6. Describe the characteristics of data, display data graphically, and describe data by its characteristics.

ASSIGNMENTS AND GRADING CRITERIA

**Quizzes**
A 10-point quiz will be given at the beginning of most classes. The quizzes will be able to be taken using guided notes (the format for which will be provided on Blackboard) and the notes you take over the assigned articles. The quizzes will be timed and must be completed within 15 minutes. If you arrive late to class you will NOT be given extra time to complete the quiz, so please be prompt. 11 quizzes at 10 points each = 110 points.

**Online Tutorial**
You will complete a tutorial called “Mastering the Basics of Visual Analysis.” It will take approximately 1 hour and includes a quiz with 10 questions at the end. The quiz questions will be worth 2 points each. Follow the directions below to complete the tutorial. 20 points.
1. Create a user account (or log in if you already have one) at [Foxylearning.com](http://Foxylearning.com)
2. Purchase Premium Access for the tutorial listed above ($9)
3. Visit the [myLearning dashboard](http://myLearning/dashboard)
4. Click on the “Connect to a Course” button in the “Connected Courses” box
5. Enter this Course Connection Code: 206698
6. Verify that the course that pops up is correct and then click the “Connect” button

**Article Presentations/Critiques**
Each student will present during one class over the type of design covered in that class. The student shall choose two articles for the presentation, one that is a sound representation of the relevant research design and one that is a flawed representation. (The flaw does not have to be with the design per se but can be with regard to any aspect of the study.) Students may locate an article in any journal as long as it is an example of single subject research. The student should be ready to justify why they chose each article, meaning they should be ready to explain why the study was sound or flawed. The student should provide a brief summary of the following components and should be ready to answer questions from the class. 100 points.
1. Identify the research question(s).
2. Describe the relation to previous research.
3. Identify the independent variable(s).
4. Provide the definition and measurement method of the dependent variable(s).
5. Identify the experimental design elements.
6. Identify any special control techniques utilized.
7. Critique the graphic presentation of the data.
8. Describe the authors’ conclusions.
9. Provide your analysis of the results and whether or not you agree with the conclusions of the authors.
10. Identify at least one potential avenue of future research that was not given by the authors.

**Excel Graph Assignment**
You will be given four different sets of data, one set collected for each of the four main single case design types. You will be required to produce four graphs corresponding to each of the four designs: reversal, multi-element, changing criterion, and multiple baseline. This will be an in-class assignment. **4 graphs at 10 points each = 40 points.**

**Research Proposal**
You will write a short (approximately 7 pages) research proposal in which you will design and describe a study aimed at answering an original research question. The proposal should include the introduction, method, results, & discussion sections as well as graphed hypothetical data. There will be 3 intermediate steps that are worth 10 points each:

1. Topic Brainstorming Ideas – Students will each bring 3 potential topics to discuss with the class.
2. Introduction – Students will bring a draft of this section for instructor/student feedback.
3. Method – Students will bring their drafts of this section for instructor/student feedback.

All final papers must conform to APA format and are due via Blackboard. In addition, students will prepare a short (approximately 10 minute) presentation of their proposal to share with the class. Students should prepare a short PowerPoint presentation to share their study. (3 intermediate assignments at 10 points each + 1 final paper at 150 points = 180 points)

**Exam**
Questions will be in the form of multiple-choice, short answer, true/false, & essay. **100 points.**

**Grading**
Quizzes: 11 @ 10 points each = 110 points
Online Tutorial: 20 points
Article Presentation: 100 points
Graphing Assignment: 40 points
Research Proposal: 180 points
Exam: 100 points
**Total points = 550**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points Needed</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>550-495 points</td>
<td>89.5% or higher</td>
</tr>
<tr>
<td>B</td>
<td>494-440 points</td>
<td>79.5-89.4%</td>
</tr>
<tr>
<td>C</td>
<td>439-385 points</td>
<td>69.5-79.4%</td>
</tr>
<tr>
<td>F</td>
<td>384 points or fewer</td>
<td>69.4% or below</td>
</tr>
<tr>
<td>Class</td>
<td>Topic</td>
<td>Readings</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>8/25</td>
<td>History &amp; Importance of Single-Case Research</td>
</tr>
<tr>
<td>2</td>
<td>9/1</td>
<td>History &amp; Importance of Single-Case Research</td>
</tr>
<tr>
<td>4</td>
<td>9/15</td>
<td>General Procedures in a Single-Case Approach</td>
</tr>
<tr>
<td>5</td>
<td>9/22</td>
<td>Behavior Assessment</td>
</tr>
<tr>
<td>6</td>
<td>9/29</td>
<td>Basic ABA Withdrawal Designs</td>
</tr>
<tr>
<td>7</td>
<td>10/6</td>
<td>Extensions of the ABA Design</td>
</tr>
<tr>
<td>8</td>
<td>10/13</td>
<td>Multiple Baseline Designs</td>
</tr>
<tr>
<td>9</td>
<td>10/20</td>
<td>Alternating Treatments Designs</td>
</tr>
<tr>
<td>10</td>
<td>10/27</td>
<td>Statistical Analyses for Single-Case Experiments</td>
</tr>
<tr>
<td>12</td>
<td>11/10</td>
<td>Reliability &amp; Generality of Data (External Validity)</td>
</tr>
</tbody>
</table>
EXPECTATIONS AND POLICIES

Credit Hour Statement

For Rollins Courses Meeting 150 Minutes Weekly for Four Credit Hours during 15-Week Semesters

This course is a four-credit-hour course that meets once per week. The value of four credit hours results from work expected of enrolled students both inside and outside the classroom. Rollins faculty require that students average at least three hours of outside work for every hour of scheduled class time. In this course, the additional outside-of-class expectations are: reading all assigned book chapters and journal articles; completing online tutorials; creating and reviewing SAFMED cards; studying for quizzes and exams; preparing article critique presentations; and working on a research proposal/presentation.

Attendance

Students are expected to attend each class and to arrive on time. A key factor in student success is class attendance, which can’t be easily replaced by copying someone else’s notes or my slides. If you must miss a class, you are responsible for finding a reliable student to take notes for you and to give you the details that you missed. Students are responsible for all material, including changes to the syllabus or objectives that are presented in class. Students are welcome to meet with the instructor during office hours or to set up an appointment outside of the established office hours to discuss the material.

Disability Statement

Rollins College is committed to equal access and does not discriminate unlawfully against persons with disabilities in its policies, procedures, programs or employment processes. The College recognizes its obligations under the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 to provide an environment that does not discriminate against persons with disabilities. If you are a person with a disability on this campus and anticipate needing any type of academic accommodations in order to participate in your classes, please make timely arrangements by disclosing this disability in writing to the Disability Services Office at (Box 2764) 1000 Holt Ave., Winter Park, FL, 37289 or email or call the Director of Disability Services, Grace Moskola at 407-975-6463, gmoskola@rollins.edu.

Academic Honor Code

Membership in the student body of Rollins College carries with it an obligation, and requires a commitment, to act with honor in all things. Because academic integrity is
fundamental to the pursuit of knowledge and truth and is the heart of the academic life of Rollins College, it is the responsibility of all members of the College community to practice it and to report apparent violations. The following pledge is a binding commitment by the students of Rollins College:

The development of the virtues of Honor and Integrity are integral to a Rollins College education and to membership in the Rollins College community. Therefore, I, a student of Rollins College, pledge to show my commitment to these virtues by abstaining from any lying, cheating, or plagiarism in my academic endeavors and by behaving responsibly, respectfully and honorably in my social life and in my relationships with others.

This pledge is reinforced every time a student submits work for academic credit as his/her own. Students shall add to all papers, quizzes, tests, lab reports, etc., the following handwritten abbreviated pledge followed by their signature: “On my honor, I have not given, nor received, nor witnessed any unauthorized assistance on this work.” Material submitted electronically should contain the pledge; submission implies signing the pledge.

**Course and Instructor Evaluation**

At the end of each semester, students are asked to evaluate the course and instructor. These evaluations are extremely valuable in the teaching and learning process on our campus. Student evaluations help assess student perceptions of classroom learning and often lead to improved teaching. Your feedback is important and Rollins students are encouraged to be honest, fair, and reflective in the evaluation process. The online evaluative survey is anonymous. Students are never identified as the respondent. Instead, each student’s comments are assigned a random number. You will be asked to rate your course and instructor on a numerical scale and through narrative comments.

The online Course and Instructor Evaluation (CIE) process opens at 8:00 a.m. on the first scheduled date. It remains open for a period of 14 days (2 weeks) until 12:00 a.m. (midnight) on the final scheduled date. The evaluation period ends prior to the start of final examinations and faculty cannot access completed evaluations until 10 days after the end of final exams. Students will receive one email at the start of the CIE period, one after the 15th day, and a final reminder the day before the CIE period ends. Students who complete evaluations for all classes will be able to view grades 10 days before students who do not complete an evaluation form.