

**BAT 493, Single Subject Design
Spring 2017
Course Syllabus and Calendar**

Course Time: Mondays, 9:00 – 11:50 AM

Course Location: Rehn Hall 323

Instructor Information

Professor: Ryan N. Redner, Ph.D., BCBA-D

Email: rredner@siu.edu

Office Location: 335-A Rehn Hall

Office Hours: Tuesday 11 AM - 2 PM // Wednesday 9:00 AM – Noon

Office Phone Number: 453-8295

Please don't hesitate to stop by during office hours. I have devoted my career to behavior analysis, and enjoy teaching the subject matter. I would like everyone to succeed in this course. The outline of this course is not meant to be a mystery, so if something is not clear feel free to contact me.

Course Description and Objectives

This course will provide students with the skills necessary to act as critical consumers of treatment outcome and service delivery research. It will also provide students with the analytical skills necessary to apply the logic of research methodology to their work with persons in a variety of rehabilitation settings. The relationship between the scientific process and human services will be emphasized throughout the course. Also emphasized will be the critique and interpretation of published research, as well as the writing competencies required for a student to successfully prepare an empirical research project.

Upon completion of this course, the student will be able to:

- Recognize the danger of fad treatments and pseudoscience.
- Articulate the role of the scientific method in behavior analysis.
- Recognize the definition of an experiment and the history of group experimental and single-case designs
- Summarize the differences between group experimental and single-subject methodology in behavior analytic research
- Articulate the concept of functional relations between independent and dependent variables and identify extraneous variables in a number of hypothetical applied research situations
- Understand and apply single-subject methodology to a variety of clinical situations
- Analyze and interpret data collected from a single-subject research project using Microsoft Excel.
- Conceptualize a research project evaluating the effectiveness of an intervention to address a socially significant problem and prepare a written report based upon formatting of the American Psychological Association.
- Present a hypothetical research project to the class following established guidelines for delivering research-based presentations.
- Acknowledge guidelines for ethical conduct in applied research

Course Materials

Readings for this class will consist of chapters from the primary texts and assigned articles. Students are expected to have read all assigned readings prior to the specified class. Readings should be completed prior to the class date which they are listed on the syllabus.

- Richards, S. B., Taylor, R. L., Ramasamy, R., & Richards, R. Y. (2014). *Single Subject Research: Applications in Educational and Clinical Settings*. (2nd ed.). Belmont, CA: Thomson Learning

- Additional REQUIRED Readings will be made available. These readings are marked in your syllabus with an asterisk (*) and will be posted on the Desire to Learn (D2L) site for this course. The web address for D2L is: <https://online.siu.edu/>
- Echo application on your phone or tablet. This software can be installed by following a link provided on D2L.

Course Goal

The primary goal of the course is to be able to understand and utilize single-subject design methodology.

Grades

Your grade will be calculated based on points earned from unit exams, class participation, hypothetical research project, and graphing assignments. Your grade is simply based on the number of points you accumulate in the course. I want you to get all the points you have earned. Therefore, if there was a mistake in grades please talk with me during office hours.

Tests (3 @ 93.34 pts each)	280 points (70%)
Participation (10/11 @ 4 pts each)	40 points (10%)
Hypothetical Research Project	40 points (10%)
<u>Graphing Assignments (4 @ 10 pts each)</u>	<u>40 points (10%)</u>
Total:	400 points

Letter Grade	Points	Percentage
A	360 - 400	90% - 100%
B	320 - 359	80% - 89%
C	280 - 319	70% - 79%
D	240 - 279	60% - 69%
F	Less than 239	0% - 59%

Lectures

Lectures will occur during each class period. During class periods in where there is a unit exam, the lecture will follow the exam.

Points Awarded For:

1. Unit Exams (3 total, 280 points)

Exams will emphasize the material since the previous test; however, the content is cumulative and you should be able to relate earlier concepts to the current material on the tests. The format of the exams will combine multiple choice, short answer, and story problems requiring you to apply your knowledge to real life situations. Students are responsible for all material covered in the readings and during lectures. The time and date of the final will be announced near the end of the semester. Exams must be made up prior to the exam date. No make-up exams will be permitted after the date of the exam.

On the rare occasion a make-up unit exam is given, it will only be counted toward a final grade if a score of C or more is acquired. Otherwise the exam will be scored as a zero (0). The reason for this rule is that sufficient time with the material is required, just like students who attended class.

2. Participation (10/11 @ 4 pts each, 40 total points):
Participation points will be earned by engaging with classroom activities that are presented through echo software. Multiple choice questions will be presented through echo and answered on your phone. If you do not participate points cannot be earned. More points will be awarded for correct answers. Your lowest participation score will be dropped.
3. Hypothetical Research Project (1 @ 40 points): One final hypothetical applied research project will be due on the date shown on the attached calendar. The project will require you to present a hypothetical research project based on a research question that interests you, as well as prepare and interpret a figure showing hypothetical results. Late projects will not be accepted.
4. Graphing Assignments: (4 @ 10 points, 40 total points): Assignments in which the student is required to prepare an APA formatted figure in Microsoft Excel using the instructions outlined in the Dixon et al. (2009) and Deochand et al., (2015) article. Late assignments will not be accepted.

Checking your Email

Some assignments or modifications to assignments may come through email, therefore as part of the class you are required to check your email on at least five (5) different days of the week.

Recommended steps to get an “A”

1. Read Chapters,
 - a. Think about the material you read
 - b. Write down discussion questions for class
2. Read additional material and articles
3. Be ready to discuss content in class (bring your discussion questions)
4. **Study notes and re-read material for exams**

Students with Disabilities

Support for Students with Disabilities. If you think you need an accommodation for a disability, please let me know at your earliest convenience and register with Disability Support services (618-453-5738; DSSsiu@siu.edu; <http://disabilityservices.siu.edu/>). Some aspects of this course, the assignments, and the way the course is usually taught may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with Disability Support Services to help us determine appropriate academic accommodations. Any information you provide is private and confidential and will be treated as such.

Feedback

We will review most (but not all) of the assignments and discuss them in class. As part of this process we will review responses that received perfect scores. This is a good time to discuss the material and gain clarification if the material is not clear. Tips on receiving feedback:

1. If you received a low score acknowledge that you received a score lower than you prefer. It doesn't feel great.
2. Attempt to learn the material. Receiving feedback well and learning from mistakes is a useful repertoire.

Point Adjustments and Grade Bargaining

It is important to me that you get all the points you earned. Please point out to me if your points were not added correctly, or if I made a clear mistake in grading (e.g., you wrote the answer “frequency” but you did not get credit for it). Partial credit, on the other hand, is somewhat a matter of opinion. And in this case it is my opinion that

matters (students are not in a position to assess their work thoroughly or objectively). I do not allow bargaining for partial credit or for points. I have a responsibility to ensure that we are training practitioners and behavior analysts well and take this responsibility seriously.

Academic Dishonesty

Each student is responsible for making himself or herself aware of the policies and procedures in the Graduate Catalog (see policies.siu.edu/_common/documents/StudentConductCode.pdf) that pertain to Acts of Academic Dishonesty. These policies cover such acts as plagiarism, preparing work for another student, cheating by any method or means, falsifying or manufacturing data, furnishing false information to a university official relative to academic matters, and soliciting, aiding, concealing, or attempting conduct in violation of this code. The student is also responsible for making himself or herself aware of the procedures applicable to cases of academic dishonesty as outlined in the Graduate Catalog, including jurisdiction at the department or college level, informal resolution, and formal disciplinary measures. A student must consult with the instructor if he or she has questions pertaining to academic dishonesty prior to the submission of an assignment or test.

Electronics Etiquette

The rule is very straight forward: No cell phones, computers, or other electronics may be used during lecture. At the first warning participation points will be lost for that class period. ***** At the second warning twenty points will be automatically deducted from a student's grade for using a laptop, ipad, or cell phone. *****

Laptops and tablets will be used for taking quizzes, at which point it is okay to use these electronics.

Grade Change Procedures

According to SIU policy, grades given at the end of a course are final and may not be changed by additional work or submitting additional materials. When work is completed for a course in which an INC grade has been given, instructors notify the Registrar's Office of that fact, along with the final grade to be given, by processing a Grade Change Card through the academic dean's office. Similarly, if the original grade that was submitted was done in error, a Grade Change Card should be processed.

Emergency Procedures.

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on the BERT's website at www.bert.siu.edu, Department of Public Safety's website www.dps.siu.edu (disaster drop down) and in the Emergency Response Guidelines pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Things to Keep in Mind:

- If you are having difficulty with this material, contact the course instructor or teaching assistant as soon as possible.
- If you wish to drop this course for any reason, the Graduate School has a final date that you can do this. It is your responsibility to drop by the date designated by the Graduate School. See <http://registrar.siu.edu/calendars/index.html>

- A grade of Incomplete will be given only under the conditions specified in the Graduate School catalog. This generally refers to situations involving emergencies or unusual family circumstances. It does not pertain to a student who is failing the course. See <http://registrar.siu.edu/grades/incomplete.html>
- This syllabus is subject to modification to correct errors. The instructor reserves the right to make additions or deletions at any time as he sees fit.

Class Schedule

Tentative Calendar/Class Schedule

Week:	Assigned Readings / Assignments / Exams
Week 1: January 23	<i>Course Overview and Introduction</i> Desire2Learn/Morris library introduction Fad treatments and pseudoscience.

Unit 1: The scientific method; behavioral assessment and measurement

Week 2: January 30	Richards, Taylor, Ramasamy, & Richards (RTRR) Chapter 1. *Watson & Rayner (2000)
Week 3: February 6	RTRR Chapter 3 *Dixon, Whiting, Rowsey, Gunnarson, & Enoch (2014)
Week 4: February 13	RTRR Chapter 4 *Levitt & Dubner Chapter 1.
Week 5: February 20	RTRR Chapter 2 *Deochand et al., (2015) pg 279 – 284 (read the task analysis for creating graphs in excel, Withdrawal design). Review for Exam
Week 6: February 27	Exam 1

Unit 2: Single System Research Designs

Week 7: March 6	<i>Withdrawal Designs</i> RTRR Chapter 5 *Reynolds et al. (2008) Graphing Assignment 1- AB design due
Week 8: March 13	No Class – Spring Break

Week 9: March 20	<p style="text-align: center;"><i>Multiple Baseline Designs</i></p> <p>RTRR Chapter 9 *Speelman et. al. (2015) *Twohig et al. (2007) *Singh et al. (2006) Graphing Assignment 2- Withdrawal design due *Deochand et al. (2015) pg. 285 (multiple baseline designs)</p>
Week 10: March 27	<p style="text-align: center;"><i>Changing Conditions/Criterion Designs</i></p> <p>RTTR Chapter 7 * Foxx et al. (1979)</p>
Week 11: April 3	<p style="text-align: center;"><i>Alternating Treatment Designs</i></p> <p>RTTR Chapter 11 *Dixon et al. (2001) Review for Exam 2.</p>
Week 12: April 10	<p>Exam 2 Graphing Assignment 3 due- Multiple Baseline Design</p>

Unit 3 Science in Culture; Analyzing Behavioral Data

Week 13: April 17	*Levitt & Dubner Chapter 4. *Dixon et al. (2009) pg. 285 (Multielement design)
Week 14: April 24	<p style="text-align: center;"><i>Analyzing Results</i></p> <p>RTRR Chapter 13, *Perone (1999) *Crosbie (1999)</p>
Week 15: May 1	<p>Hypothetical Research Presentation Due (ABSOLUTELY NO LATE ASSIGNMENTS WILL BE ACCEPTED). Graphing Assignment 4 due – Multielement design.</p>
Week 16: May 8 - 12	<p>Finals Week - Exam 3 (See Finals Exam Schedule)</p>

IMPORTANT DATES *

Semester Class Begins:	01/17/2017
Last day to add full-term course (without Dean's signature):	01/22/2017
Last day to withdraw from the University with a full refund:	01/27/2017
Last day to drop a full-term course for a credit/refund:	01/29/2017
Deadline to apply to graduate at the end of this term:	04/2/2017
Final examinations:	05/8–05/12/2017
Commencement:	05/13/2017

*For more detailed information on the above deadlines, please visit <http://registrar.siu.edu/calendars>. For add/drop dates that apply to shorter-than-full-term courses, please look at the Schedule of Classes search results at <http://registrar.siu.edu/schedclass/index.php>.

SPRING SEMESTER HOLIDAYS

Martin Luther King Jr.'s Birthday Holiday 01/16/2017

Spring Break 03/11–03/19/2017

WITHDRAWAL POLICY ~ Undergraduate only

Students who officially register for a session must officially withdraw from that registration in a timely manner to avoid being charged as well as receiving a failing grade for those classes. An official withdrawal must be initiated by the student, or on behalf of the student through the academic unit, and be processed by the Registrar's office. For the proper procedures to follow when dropping courses and when withdrawing from SIU visit: <http://registrar.siu.edu/students/withdrawal.php>

INCOMPLETE POLICY~ Undergraduate only

An INC grade may be assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments for the course. An INC must be changed to a completed grade within one full semester (undergraduates), and one full year (graduate students), from the close of the term in which the course was taken or graduation, whichever occurs first. Should the student fail to complete the remaining course requirements within the time period designated, the incomplete will be converted to a grade of F and such grade will be computed in the student's grade point average. For more information visit: <http://registrar.siu.edu/grades/incomplete.php>

REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit more than once. For students receiving a letter grade of A, B, C, D, or F, the course repetition must occur at Southern Illinois University Carbondale. Effective for courses taken Summer 2013 or later, only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned.

This policy will be applied to all transferrable credit in that only the last grade will be used to calculate grade point average. Only those courses taken at the same institution are considered repeats under this policy. See full policy at <http://registrar.siu.edu/students/repeatclasses.php>

GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please refer to the graduate catalog at <http://gradschool.siu.edu/about-us/grad-catalog/>

DISABILITY POLICY

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must contact DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. <http://disabilityservices.siu.edu/>

PLAGIARISM

Student Conduct Code <http://srr.siu.edu/student-conduct-code/>

Guidelines for Faculty <http://pvcaa.siu.edu/common/documents/Plagiarism/Guide%20to%20Preventing%20Plagiarism.pdf>

SAFETY AWARENESS FACTS AND EDUCATION

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:

<http://safe.siu.edu>

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: call (618) 453-1492, email siucares@siu.edu, or <http://salukicare.siu.edu/>

SIU's EARLY WARNING INTERVENTION PROGRAM (EWIP)

Students enrolled in courses participating in SIU's Early Warning Intervention Program might be contacted by University staff during a semester. More information can be found at the Core Curriculum's Overview webpage: <http://corecurriculum.siu.edu/program-overview/>

EMERGENCY PROCEDURES

We ask that you become familiar with Emergency Preparedness @ SIU. Emergency response information is available on posters in buildings on campus, on the Emergency Preparedness @ SIU website, and through text and email alerts. To register for alerts visit: <http://emergency.siu.edu/>

STUDENT MULTICULTURAL RESOURCE CENTER

The Student Multicultural Resource Center serves as a catalyst for inclusion, diversity and innovation. As the Center continues its work, we are here to ensure that you think, grow and succeed. We encourage you to stop by the Center, located in Grinnell Commons, to see the resources available and discover ways you can get involved on the campus. Visit us at <http://inclusiveexcellence.siu.edu/>

LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:

Tutoring : <http://tutoring.siu.edu/>

Math Labs <http://math.siu.edu/courses/course-help.php>

WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit:

<http://write.siu.edu/>

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY

Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: <http://diversity.siu.edu/#>

MILITARY COMMUNITY

There are complexities of being a member of the military community and also a student. Drill schedules, calls to active duty, complications with GI Bill disbursement, and other unforeseen military and veteran related developments can complicate academic life. If you are a member of the military community and in need of accommodations please visit Veterans Services at <http://veterans.siu.edu/>

Additional Resources:

ADVISEMENT: <http://advisement.siu.edu/>

SIU ONLINE: <https://online.siu.edu/>

SALUKI SOLUTION FINDER: <http://solutionfinder.siu.edu/>

MORRIS LIBRARY HOURS: <http://libguides.lib.siu.edu/hours>

***Supplemental Assigned Readings List (on course website)**

- *Crosbie, J. (1999). Statistical inference in behavior analysis: Useful friend. *The Behavior Analyst*, 22, 105-108.
- *Deochand, N., Costello, M. S., & Fuqua, R. W. (2015). Phase breaks, and trend lines using Excel 2013. *Journal of Applied Behavior Analysis*, 48(2), 478-493. - change lines, scale
- *Dixon, M. R., Benedict, H., & Larson, T. (2001). Functional analysis and treatment of inappropriate verbal behavior. *Journal of Applied Behavior Analysis*, 34(3), 361–363.
<http://doi.org/10.1901/jaba.2001.34-361>
- *Dixon, M. R., Jackson, J. W., Small, S. L., Horner-King, M. J., Lik, N. K., Garcia, Y., & Rosales, R. (2009). Creating single-subject design graphs in Microsoft Excel 2007. *Journal Of Applied Behavior Analysis*, 42(2), 277-293. doi:10.1901/jaba.2009.42-277
- *Dixon, M. R., Whiting, S. W., Rowsey, K., Gunnarsson, K., & Enoch, M. R. (2014). Direct Observation of Road Construction Worker Behavior. *Journal Of Organizational Behavior Management*, 34(3), 179-187.
- *Foxy, R. M., & Rubinoff, A. (1979). Behavioral treatment of caffeinism: Reducing excessive coffee drinking. *Journal of Applied Behavior Analysis*, 34, 497-500.
- *Levitt, S. D., & Dubner, S. J. (2009). *Freakonomics: a rogue economist explores the hidden side of everything*. New York: Harper Perennial
- *Perone, M. (1999). Statistical inference in behavior analysis: Experimental control is better. *The Behavior Analyst*, 22, 109-116.
- *Reynolds, B., Dallery, J., Shroff, P., Patak, M., & Leraas, K. (2008). A web-based contingency management program with adolescent smokers. *Journal of Applied Behavior Analysis*, 41, 597-601.
- *Speelman, R. C., Whiting, S.W., & Dixon, M.R. (2015). Using behavioral skills training and video modeling to teach blackjack skills. *Journal of Applied Behavior Analysis*. (48) 1-11.
- *Singh, N. N., Lancioni, G. E., Winton, A. W., Curtis, W., Wahler, R. G., Sabaawi, M., & McAleavey, K. (2006). Mindful staff increase learning and reduce aggression in adults with developmental disabilities. *Research in Developmental Disabilities*, 27(5), 545-558.
- *Twohig, M. P., Shoenberger, D., & Hayes, S. C. (2007). A preliminary investigation of acceptance and commitment therapy as a treatment for marijuana dependence in adults. *Journal of Applied Behavior Analysis*, 40, 619-632.

BCaBA Undergraduate Syllabus Addendum

Students earning a Bachelor’s degree in Behavior Analysis and Therapy have the opportunity to fulfill, in part, the requirements for becoming a Board Certified Assistant Behavior Analysis® (BCaBA®). The BCaBA is an undergraduate-level certification in behavior analysis. Professionals who are certified at the BCaBA level may not practice independently, but must be supervised by

Requirement	Description	Fulfilled by completion of degree requirements for a Bachelor’s in Behavior Analysis and Therapy
Degree	Applicants must possess a minimum of a bachelor’s degree from a qualifying accredited institution. The bachelor’s degree may be in any discipline.	Yes
Coursework	Coursework must come from a qualifying accredited institution and cover the required content outlined in the BACB’s Fourth Edition Task List and Course Content Allocation documents. Only courses where the applicant was formally enrolled and earned a passing grade (“C” or better for graded courses) are acceptable.	Yes
Experience	Applicants must complete 1000 hours of supervised independent fieldwork that fully complies with all of the current BACB Experience Standards. For more information, visit: http://bacb.com/wp-content/uploads/2015/08/150824-experience-standards-english.pdf	No
Examination	Applicants must take and pass the BCaBA examination. Authorization to take the exam is only provided to applicants who have submitted a complete exam application to the BACB, including all documentation necessary to demonstrate that they have met all of the criteria above. For more information, visit: http://bacb.com/examination-information/	No

someone certified at the BCBA/BCBA-D level. In addition, BCaBAs can supervise the work of Registered Behavior Technicians, and others who implement behavior-analytic interventions. Obtaining certification as a BCaBA improves job applicants’ eligibility and qualification for many positions in the field of behavior analysis. Requirements for the BCaBA are outlined in the table below.

As outlined in the table above, the degree you receive and the courses you complete as part of the degree requirements for a Bachelor’s in Behavior Analysis and Therapy will be accepted by the Behavior Analyst Certification Board. However, the experience hours required to sit for the examination are not provided by participation in this program. In order to obtain these experience hours, an applicant must seek out an external site and supervisor. These experience hours may be obtained during or following completion of the program (see the BACB Experience Standards). In addition, the Behavior Analysis and Therapy program does not administer the examination; an applicant must first apply to take this exam through the BACB (fees apply) and take the exam through Pearson VUE (fees apply).