Course Description & Objectives:
This course will focus on research design and evaluation methodology for interventions with single systems including individuals, families, and organizations.

Following participation in this course, the student will be able to:

1. Understand and explain the history of and scientific viewpoint associated with single system design
2. Given the description of a single system design (written or graphical) a) name it, b) evaluate its procedural implementation, c) discuss the situations for which it is appropriate and inappropriate, d) explain the logic by which it controls for extraneous variables and evaluate it with respect to these and e) interpret results
3. Present a completely labeled figure with hypothetical data illustrating various single system designs
4. Compare and evaluate the various single system designs with respect to the types of research questions for which they are appropriate and their control of extraneous variables
5. Given an outline detailing scientific manuscript format, create research proposals to conduct various single system experimental designs

Primary Text:

Recommended Text:
Additional Required Readings:
Additional readings have been made available through the Desire2Learn 509A course website or through email (your siu.edu account). You will find these additional readings listed on the syllabus and like the readings from your textbook, they are required reading for the course.

Requirements and Grading:

Online Chats, Participation, & Quizzes

Online Chats

This class will meet every Monday night with Ryan from 8 pm to 9 pm CST and Thursday night with Dr. Whiting from 8 pm to 9:30 pm CST. Class will take place in the SIU Online chat room that has been set up for the course (you can access the site at https://online.siu.edu/). Even though this course will be presented to you ‘online’, it will require active participation on your part – your level of participation, or lack thereof, will be graded. On the Monday and Thursday chat nights, even though you are able to log in from anywhere with an internet connection, I encourage you to treat the 1-1.5 hour sessions as if you were 'going to class' with the same effort and attention you would give if we were all sitting in the classroom together. Be sure that you are using a device that can access and play videos, navigate to other webpages, etc.

You are encouraged to speak in class via discussion boards and/or chat rooms regarding questions or comments you have about the text and any related issues. I will present the material scheduled for each chat session in the form of lecture and discussion. I will call on individual students from time to time. The requirement for participation points earned in chat is above and beyond just logging in. It is expected that you have read the material prior to coming to chat and that your contributions to discussions are informed and intelligent.

Participation

To aide in your preparation for chat, on the syllabus is a calendar explaining exactly which readings will be covered in chat each week. It is to your advantage to complete these readings PRIOR TO coming to chat each week. In-chat lectures will cover the important themes from the readings each week and will be followed by Q & A and general discussion.

For each chat, each one of you has the opportunity to earn 100% of the participations points available. There are a total of 42 participation points available so this averages out to be approximately 3 points per week and this does not include the quiz points on weeks those will occur. The behaviors that enable you to earn your 3 points each week include giving correct (or at least intelligent) responses when I call on you randomly (I aim to call on everyone at least once during each chat), volunteering comments or questions when I ask the group as a whole, and contributing to small group exercises.
Quizzes

Over the course of the semester, there will be five quizzes administered during the chat sessions that will serve as basic reading/lecture checks. These quizzes will be unannounced (they will occur at random chat sessions) and consist of multiple choice or short answer questions based on the week’s material. Quizzes will take place in chat, be timed (you will have a designated amount of time to email you answers), and will always be worth 5 points for a grand total of 25 possible points over the semester.

Exams

Seven exams will be administered and scheduled on the dates indicated on the syllabus. In general, except for the week of Spring Break, exams will take place EVERY OTHER week and cover 2 weeks’ worth of material. Exams will be due by Saturday at 11:30 pm the weeks they occur. Late exams will not be accepted. The exams will be worth 20 points apiece and will feature approximately 5-6 short answer and essay questions. The final exam will be the same as all other exams and cover 2 weeks of material only.

Single Subject Design Projects

Two single subject design projects will be due on the dates indicated on the syllabus. During chat, we will go through how to complete one of these projects using the withdrawal design as an example. For the two projects, you will use a multiple baseline design (100 pts.) for the first and for the second, you will be able to choose between the use of a changing criterion or an alternating treatments design (100 pts.).

For this project, you will not actually collect any data, however you will include hypothetical results as if you had carried out the intervention. You will be provided with an outline to follow that will help you adhere to scientific content and structure of an actual manuscript. You should use the same outline for both projects and although you may make them based on the same general topic (skill acquisition, addiction, problem behavior in the classroom), each must be on a different specific topic (mand training, excessive drinking, out of seat behavior). To ensure you’re doing this, the two projects should include a different set of references in the introduction section and a different independent variable. Switching the population to which your intervention is delivered, for example, would not be considered a novel enough change from a prior project. Projects will be due on the dates indicated on the syllabus and points will be deducted for APA errors.

A = 407 – 365 points
B = 364 – 324 points
C = 323 – 283 points
F = 282 or Lower

- If you are having difficulty with this material, see the course instructor as soon as possible.
- This syllabus is subject to modification to correct errors, and to make additions or deletions to improve the course.
- If you wish to drop this course, you must do so after the date designated by the university. A grade of Incomplete will be given under the conditions specified in the university catalog.

Academic Dishonesty

Each student is responsible for making himself or herself aware of the policies and procedures in the Graduate Catalog (pp. 44-46) 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 (pp. 49-54), 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.

Accomodations

The instructor is committed to equal opportunity in education for all students, including those with documented disabilities. It is the responsibility of students with documented disabilities to contact the instructor during the first week of class to discuss appropriate accommodations to ensure equity in grading, classroom experiences, and outside assignments. Documentation is to be provided and accommodations are to be arranged with Disability Support Services.

Emergency Procedures

SIU is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website at www.dps.siu.edu (disaster drop down) and the Emergency Response Guideline pamphlet. 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 you instructor during an evacuation or sheltering emergency.

Course Schedule:

TH, JAN. 22 – MEET IN D2L CHATROOM FOR COURSE INTRODUCTION
UNIT 1: Psychology as a Science & Overview of SSD

T, JAN. 27 & TH, JAN. 29

The Science of Behavior


Introduction to Single System Designs

Kazdin, Ch. 1 (pg. 10 ‘Historical Overview of Research with the Single Case Design’ to pg. 20 – stop at ‘Contexts and Perspective’)


T, FEB. 3 & TH, FEB. 5

Goals & Measurement

Kazdin Ch. 3 (Background and Key Measurement Considerations)

Behavioral Observation & Measurement

Kazdin Chapter 4 (Methods of Assessment)

Basics of Single-Subject Designs

Kazdin Ch. 2 (Underpinnings of Scientific Research)


EXAM 1 DUE FEB 7
UNIT 2: Withdrawal Designs

T, FEB. 10 & TH, FEB. 12

Case Studies

Kazdin Chapter 1 (pg. 3 – ‘The Uncontrolled Case Study’ to pg. 10 – stop at ‘Historical Overview’)


T, FEB. 17 & TH, FEB. 19

Withdrawal Designs

Kazdin Ch. 6 (Introduction to Single Case Research and ABAB Designs: start at pg. 127 – ‘ABAB Designs: Basic Characteristics’)

Cuvo, A. J. Time Series and Replication Logics for the Withdrawal Design


EXAM 2 DUE FEB 21

Complex Withdrawal Designs and Related Issues

T, FEB. 24 & TH, FEB. 26


Withdrawal Design Applications


UNIT 3: Multiple Baseline Designs

T, MARCH 3 & TH, MARCH 5

Kazdin Ch. 7 (Multiple-Baseline Designs)

Cuvo, A. J. *Time Series and Replication Logics for the Multiple Baseline Design*

T, MARCH 10 & MARCH 12 – SPRING BREAK – NO CLASS

EXAM 3 DUE MARCH 16 (Monday, due to Spring Break)

T, MARCH 17 & TH, MARCH 19

Variations of the Multiple Baseline Design


T, MARCH 24 & TH, MARCH 26

Multiple Baseline/Probe Design Applications


**EXAM 4 DUE MARCH 28**

**SSD Project 1 DUE SUNDAY MARCH 29**

**T, MARCH 31 & TH, APR 2**

**UNIT 4: Changing Criterion and Alternating Treatment Designs**

**Changing Criterion Designs & Applications**

Kazdin Ch. 8 (Changing Criterion Designs)


**T, APR. 7 & TH, APR. 9**
Alternating Treatment Designs and Applications
Kazdin Ch. 9 (Multiple (Alternating) Treatment Designs)


EXAM 5 DUE APR 11

T, APR. 14 & TH, APR. 16

Selecting a Design


UNIT 5: Evaluating Research Outcomes

Data Evaluation (General Overview – Visual, Statistical, Clinical; Integrity of the Independent Variable

Kazdin Ch. 12 (Data Evaluation)


T, APR. 21 & TH, APR. 23
**Evaluating Data (Visual Analysis)**

Kazdin Ch. 13 (Graphic Display of Data for Visual Inspection)

Johnston & Pennypacker Ch. 12 – Analyzing Behavioral Data


**EXAM 6 DUE APR 25**

**T, APR. 28 & TH, APR. 30**

**Evaluating Data (Statistical Analysis)**

Kazdin Appendix (Statistical Inferences: pg. 401-419)


**T, MAY 5 & TH, MAY 7**

**Application (Program Evaluation), Generalization, and Maintenance**

Kazdin Ch. 15 (Summing up: Single case research in perspective)


**FINAL EXAM and SSD Project 2 DUE by 11:30 pm Thursday, May 14th.**