

Master of Applied Psychology (MAP)
Graduate School of Applied and Professional Psychology (GSAPP)
Rutgers University
New Brunswick, New Jersey
Spring 2021

Introduction to Analysis and Single-Case Design
18:820:512
Credits: 3
Level: Graduate
Wednesdays 6:15 pm to 8:45 pm

Instructor: Faris R. Kronfli, Ph.D., BCBA-D

Office: Your computer

Phone: 301-788-6655

E-mail: faris.kronfli@rutgers.edu

Office Hours: By appointment only. The instructor will make every reasonable effort to meet with students whenever necessary.

Zoom Link: <https://rutgers.zoom.us/j/3016079360?pwd=RUF4VjR2Ky9rciV0YTJyOWpJQy95UT09>

Rutgers University Mission

As the premier comprehensive public research university in the state's system of higher education, Rutgers, The State University of New Jersey, has the threefold mission of

- providing for the instructional needs of New Jersey's citizens through its undergraduate, graduate, and continuing education programs,
- conducting the cutting-edge research that contributes to the medical, environmental, social, and cultural well-being of the state, as well as aiding the economy and the state's businesses and industries, and
- performing public service in support of the needs of the citizens of the state and its local, county, and state governments.

Each component of the university's mission reinforces and supports the other two.

As the University of New Jersey®, Rutgers is dedicated to teaching that meets the highest standards of excellence, to conducting research that breaks new ground, and to provide services, solutions, and clinical care that help individuals and the local, national, and global communities where they live.

GSAPP Mission

The mission of GSAPP is threefold: education, research/scholarship, and public service. Its goal is to prepare well-educated, qualified, and competent direct-service psychologists who have a special commitment to direct community involvement and to underserved populations--professionals who can integrate scientific knowledge with innovation in the delivery of psychological services to individuals, families, groups, and organizations. Professionals receiving a doctoral degree in psychology should be capable of extending psychological knowledge and exhibiting the high level of analytic skills and theoretical understanding needed to use existing and emerging psychological knowledge.

Core Values. We are guided by four core values that are apparent in our learning environment, centers, and clinics:

1. **Academic excellence** in preparing students for careers in clinical and school psychology.
2. Commitment to **social justice** and helping **underserved populations**.
3. **Diversity** of students trained, approaches used, theoretical orientations followed, and populations served.
4. **Knowledge generation and dissemination** using contemporary research approaches.

MAP Statement

The program embraces the mission of the school by offering instruction that has an emphasis on civic and global citizenship, social justice, and cultural diversity. This course of study provides students with the knowledge needed to understand individual and collective behaviors; develop quantitative and qualitative statistical analysis and research design needed to analyze the corresponding physical and environmental contributors to human behavior; and a beginning understanding of the analysis and treatment of behavior problems and disorders.

The MAP degree will prepare students with the requisite theoretical knowledge; critical thinking and problem-solving skills needed to successfully participate in employment or scholastic activities. Students will have opportunities to pursue scholarly activities that prepare them to successfully compete for admissions into doctoral-level psychology and related academic programs and pursue master's level career pathways through available concentration and certificate programs (see examples of concentration areas listed below). In addition to completing the required coursework (36 credits), completion of the MAP degree will be marked by a culminating academic experience—Capstone project (either a research project/presentation (3 credits) and experiential learning activity (6-credit practicum training). In general, students will acquire a knowledge base grounded in psychological theory and experiential learning (research or practicum) designed to further advance their personal and professional career development.

Course Description/Overview

This course will introduce the student to the process of analysis utilizing baseline logic and how it applies to a single-case methodology. The course will provide an overview of behavior measurement and recording, and visual analysis and graphing. Basic single-case research designs will be discussed, including general characteristics, strengths, and considerations. General issues regarding internal and external validity will be discussed, as well as ethical considerations in research design and implementation. Students will practice applying the principles for research design and ethics to the interpretation of research literature.

Objectives for the Course

The student will be able to:

1. State the principles of baseline logic.
2. Describe the process of planning and directing behavior recording procedures.
3. Identify key features or visual data display and analysis.
4. Identify and describe the advantages and disadvantages of basic single-case designs.
5. Discuss issues in planning, replicating, evaluating and disseminating ABA research.
6. Describe ethical principles as they related to ABA research.
7. Interpret research articles from the behavior analytic literature.

Assignments and Evaluation Method

Discussion Questions	90 points
-Nine assignments, max of 10 points	
Participation	35 points
-Nine opportunities, max of 5 points	
-Lowest two scores will be dropped	
Mid-Term Exam	40 points
Final Exam (cumulative)	70 points
Research Proposal	40 points
Presentation	25 points

Total **300 points**

Grades and Grading Policy

Grade Description	Numerical Equivalent
A Outstanding	90-100 (4.0)
B+ Intermediate Grade	87-89 (3.5)
B Good	80-86 (3.0)
C Average	70-79 (2.0) Grades of C do not count toward graduation
F Failure	69 or below (0.0)
INC Incomplete	
S Satisfactory	
U Unsatisfactory	
PA Pass	
NC No credit given	

Program Requirement

All MAP and Graduate Certificate in ABA students must achieve a grade of B or better and maintain a GPA of 3.0, or academic remediation will be enforced.

Required Text

I will post all required readings on canvas.

Course Outline

NOTE - I will likely make changes throughout the semester as I find more recent or relevant readings. You will always be notified with at least a week prior to class.

Week 1 (1/20): Course Overview

Week 2 (1/27): Introduction to Single Subject Design and Analysis

- Kazdin: Chapter 1: Introduction and Historical Perspective
- Kazdin: Chapter 2: Underpinnings of Scientific Research
- Perone & Hursh (2013). Single-case experimental designs. (pages 107 to 110).

- Petursdoittir & Carr (2018). Applying taxonomy of validity threats from mainstream research designs to single-case experiments in applied behavior analysis. *Behavior Analysis in Practice*, 11, 228-240.

Week 3 (2/3): Behavioral Assessment

- Kazdin: Chapter 3: Background and Key Measurement Considerations
- Kazdin: Chapter 4: Methods of Assessment
- LeBlanc et al. (2016)
- Meany-Daboul et al. (2007)
- Proposal ideas due.

Week 4 (2/10): Reliability/Interobserver Agreement

- Cooper: Chapter 5
- Kazdin, A. E. (1977). Artifact, bias, and complexity of assessment: The ABCs of reliability. *Journal of Applied Behavior Analysis*, 10, 141-150.

Week 5 (2/17): Issues in the Quality of Behavior Measurement

- Graphic Data Displays - Cooper et al, Chapter 6

Week 6 (2/24): Midterm Review

Week 7 (3/3): Midterm Examination

Week 8 (3/10): Reversal Designs

- Cooper et al, Chapter 8 part 1
- Kazdin: Chapter 6: Introduction to Single Case Research and ABAB Designs

Week 9 (3/24): Multiple Baseline Design/Changing Criterion Designs

- Cooper: Chapter 9
- Kazdin: Chapter 7: Multiple Baseline Designs
- Kazdin: Chapter 8: Changing Criterion Designs

Week 10 (3/31): Alternating Treatment Designs/Additional Design Options

- Cooper et al, Chapter 8 part 2
- Kazdin: Chapter 9: Multiple Treatment Designs
- Kazdin: Chapter 10: Additional Design Options
- Kazdin: Chapter 11: Quasi-Experimental Designs

Week 11 (4/7): Evaluating Single-Case Data

- Kazdin: Chapter 12: Data Evaluation
- Kazdin: Chapter 13: Graphic Display of Data for Visual Inspection
- Hagopian, L.P., Fisher, W.W., Thompson, R.H., Owen-DeSchryver, J., Iwata, B.A., Wacker, D.P. (1997). Toward the development of structured criteria for interpretation of functional analysis data. *Journal of Applied Behavior Analysis*, 30(2), 313-25.
- Kahng, S., Chung, K. M., Gutshall, K., Pitts, S. C., Kao, J.& Girolami, K. (2010). Consistent visual analyses of intrasubject data. *Journal of Applied Behavior Analysis*, 43, 35-45

Week 12 (4/14): Perspectives and Contributions of the Designs

- Kazdin: Chapter 14: Evaluation of Single-Case Subject Designs: Challenges, Limitations, and Directions
- Kazdin: Chapter 15: Summing Up: Single-Case Research in Perspective

Week 13 (4/21): Proposal Presentations

Week 14 (4/28): Proposal Presentations

Week 15 (5/12): Final Examination

Discussion Questions

Discussion questions will be based on the readings and are due the Tuesday before class by 11:59 PM. Please be prepared to discuss these during class. They should be emailed to me at (as a word document, not in the email body) faris.kronfli@rutgers.edu.

Participation

At the end of each class, I will ask you to rate your participation using a three-point Likert scale.

0 → I did not participate at all.

2.5 → I made some comments but did not make meaningful contributions to the discussion.

5 → I participated and made meaningful contributions to the discussion.

I will independently rate your participation as well. If we agree, you will get a bonus point. We define “meaningful contributions” as:

- Asking relevant questions (e.g., “Why would you conduct the tangible condition of the functional analysis if you strongly suspect the behavior is maintained by escape?” and a nonexample would be a one-word question such as, “why?”).
- Answering questions posed by the instructors or classmates with thoughtful and appropriate responses (i.e., the answer does not need to be accurate, but should be a valid attempt. “Well, maybe we might want to conduct the tangible condition in case we missed something in the initial observation” and a nonexample might be, “No, doesn’t make sense to me”).
- Generating ideas during discussion or adding thoughts to the existing conversation (e.g., “I think you could apply a similar design when implementing this treatment in a group or natural setting” and a nonexample might be, saying “yes” when someone asks whether you grasped the rationale behind conducting a home baseline assessment during a child’s intake evaluation).
- Commenting on others’ questions (e.g., “I think that’s a great idea, but perhaps we could include a frequency measure as well to be sure that we capture all instances of inappropriate mealtime behavior,” where a nonexample might be, “That’s a great idea”). Complementing another individual on their contribution is wonderful and encouraged but would not be sufficient to earn participation points.

Research Proposal

Each student will be required to complete a 4- to 6-page paper (double-spaced, 12-point font) outlining a hypothetical study. Because this is a proposal, you will use the future tense in your writing. These need to be emailed to me by Wednesday **4/14/21 at 11:59 PM**.

1. Introduction

- Purpose/Background: Brief description of the purpose of the proposal.
- State your research question.

2. Method

- Participants/Setting: Where you will run the study and with whom?
- Measurement: What are you going to measure? How?
- Research Design: Which design (e.g., multiple baseline, reversal) and why (be sure to discuss baseline logic)?
- Procedure: How will you conduct sessions?

3. Hypothetical Results

- Create dummy data.

- What you think the data might look like?
Why would you expect to see that?

Important Note: Plagiarism essentially means that you cannot use the words and ideas of another person without giving them credit. Therefore, “quotation marks” should be used to indicate the exact words of another. Each time you paraphrase another author you will need to credit the source in the text. If you have any questions about what constitutes cheating or plagiarism, please see me. Students who plagiarize any material will earn a grade of F for the course.

Presentation: Each student will do a 10- to 15-minute presentation summarizing their proposal for the class. Students should use PowerPoint slides for the presentation and be prepared to discuss them and respond to questions.

Academic Integrity

All Rutgers students should review and adhere to the University principles of academic integrity, available at <http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers/>

APA Citation Style

All papers **MUST** be written using the APA style (7 ed.).

Student Resources

For more information visit <https://gsapp.rutgers.edu/current-students/important-links>.

Accommodations Due to Disability

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form (<https://webapps.rutgers.edu/student-ods/forms/registration>).

Title IX

<http://compliance.rutgers.edu/resources/resources-for-facultystaff/>

Counseling services

Students often experience personal problems or difficulties during the term that may interfere with learning and their daily activities. If you or someone you know needs to talk to someone regarding such personal issues, the University provides free counseling services through the Counseling and Psychological Services (CAPS) and their information can be found at <http://psychologicalservices.rutgers.edu>. They also offer several useful workshops for general stress management and techniques for promoting mental health. If you have any questions about CAPS or other services, I am happy to speak with you privately.