TEXAS A&M UNIVERSITY-SAN ANTONIO

Applied Behavior Analysis

ABA 3303 Advanced Research Methods in ABA

Spring 2026

8-Weeks

Instructor Information

- **Instructor:** Victoria Beaman
- **Office Hours:** By appointment. Email to schedule a time.
- **E-mail:** vbeaman@tamsu.edu *(preferred method of contact)*
    - Please do not send me messages on Blackboard or reply to class announcements.

Course Description

This course builds on ABA 3303 Advanced Research Methods in ABA to further student's knowledge of research methods used in ABA. Students receive additional practice and experience with direct and frequent measurement. Students will further their knowledge of selecting the most appropriate measurement procedures while taking into accounts threats to measurement validity and reliability. Students are further exposed to experimental designs in ABA. Regular graphing of ABA data and visual interpretation of that data will be emphasized. Students will learn to interpret ABA articles.

Course Corequisite

ABA 3301 Introduction to ABA
ABA 3302 Introduction to Research Methods in ABA

Course Structure

Synchronous class on Tuesday from 6:00-8:00 PM CST

Student Learning Outcomes/Objectives

Upon Completion of the course, the student will be able to:

1. Select and use appropriate measurement procedures.
2. Describe validity of data.
3. Describe reliability of data.
4. Define interobserver agreement
5. Describe how experimental control is shown with various single-subject experimental designs.
6. Describe limitations of various single-subject experimental designs.
7. Create paper and pencil and computer graphs of ABA data.
8. Interpret ABA articles.

BACB® 5th Edition Task List Items

Students will learn the following items from the BACB® 5th edition task list:

C. Measurement, Data Display, and Interpretation

C-1 Establish operational definitions of behavior.
C-2 Distinguish among direct, indirect, and product measures of behavior.
C-3 Measure occurrence (e.g., frequency, rate, percentage).
C-4 Measure temporal dimensions of behavior (e.g., duration, latency, interresponse time).
C-5 Measure form and strength of behavior (e.g., topography, magnitude).
C-6 Measure trials to criterion.
C-7 Design and implement sampling procedures (i.e., interval recording, time sampling).
C-8 Evaluate the validity and reliability of measurement procedures.
C-9 Select a measurement system to obtain representative data given the dimensions of behavior and the logistics of observing and recording.
C-10 Graph data to communicate relevant quantitative relations (e.g., equal-interval graphs,
bar graphs, cumulative records).
C-11 Interpret graphed data.

D. Experimental Design

D-1 Distinguish between dependent and independent variables.
D-2 Distinguish between internal and external validity.
D-3 Identify the defining features of single-subject experimental designs (e.g., individuals serve as their own controls, repeated measures, prediction, verification, replication).
D-4 Describe the advantages of single-subject experimental designs compared to group designs.
D-5 Use single-subject experimental designs (e.g., reversal, multiple baseline,

multielement, changing criterion).
D-6 Describe rationales for conducting comparative, component, and parametric analyses.

Textbook & Course Materials

- **Required Texts:**

Cooper, J. O, Heron T. E., & Heward, W. L. (2020). *Applied behavior analysis* (3rd ed.). Upper Saddle River, NJ: Pearson.

American Psychological Association (2020). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.

Blair, B. J., & Mahoney, P. J. (2021). Creating Single-Subject Research Design Graphs with Google Applications. *Behavior Analysis in Practice*, *15*(1), 295–311. https://doi.org/10.1007/s40617-021-00604-5

Higgins, J. P., Riggleman, S., & Lohmann, M. J. (2023). A Practical Guide to Writing Behavior Intervention Plans for Young Children. *Journal of Special Education Apprenticeship*, *12*(1).

McDaniel, S. C., & Bruhn, A. L. (2016). Using a Changing-Criterion Design to Evaluate the Effects of Check-In/Check-Out With Goal Modification. *Journal of Positive Behavior Interventions*, *18*(4), 197-208. https://doi-org.tamusa.idm.oclc.org/10.1177/1098300715588263

Morin, K. L., Lindström, E. R., Kratochwill, T. R., Levin, J. R., Blasko, A., Weir, A., Nielsen-Pheiffer, C. M., Kelly, S., Janunts, D., & Hong, E. R. (2023). Nonconcurrent Multiple-Baseline and Multiple-Probe Designs in Special Education: A Systematic Review of Current Practice and Future Directions. Exceptional Children. https://doi.org/10.1177/00144029231165506

Rispoli, M., Camargo, S., Machalicek, W., Lang, R. and Sigafoos, J. (2014), Functional communication training in the treatment of problem behavior maintained by access to rituals. *Journal of Applied Behavior Analysis, 47,* 580-593. https://doi-org.tamusa.idm.oclc.org/10.1002/jaba.130

Snyder, S. K., Griffin, M. L., & Ayres, K. M. (2024). Assessment and treatment of multiply maintained self injury for a visually impaired elementary student with autism. Behavioral Interventions, e2011.

- **Recommended Texts & Other Readings:**

How to Access Course Materials

- Log into Jagwire: https://jagwire.tamusa.edu
- Click on Blackboard
- Under “My Courses,” locate our course and click on it.

COURSE ACTIVITIES & ASSIGNMENTS

All assignments are due by 11:59 pm CST on the date listed in the Course Schedule unless otherwise noted.

QUIZZES (6 at 5 POINTS EACH)

Quizzes will be given on weeks 1-6 as noted in the course calendar. Quizzes will cover assigned reading material for the day as well as material previously covered in class. There will be a total of 6 quizzes, each worth 5 points. Quiz items may be multiple-choice, fill-in-the-blank, and short-answer questions. The time allotted completion time for quizzes will be 5 minutes.

MINI RESEARCH PAPER (25 POINTS)

You will research and analyze a topic from the list of choices below:

- Discrete Trial Training
- Lovaas Approach/Method
- Pivotal Response Treatment
- Natural Environment Training
- Verbal Behavior
- Cognitive Behavioral Therapy
- Social Skills Training
- Check In/Check Out System
- Group Contingencies
- Peer Mediation
- Functional Communication Training
- Other ABA Topics (only with approval from Instructor)

This paper must thoroughly explain (with research-supported evidence) the following *at minimum*:

- Peer-reviewed research that highlights the chosen topic
- Population: With whom is the topic used (e.g., age of individuals, specific groups of individuals, process and frequency, who can administer/conduct)?
- Data: What type of data can be collected through use and/or analysis of your topic and why would this data collection be useful in the analysis of a behavior?
- Focus on the purpose, methods, and results of the study.
- Other relevant information that is pertinent to your topic

The paper must be a minimum of 6 (maximum of 8) pages of narrative (does not include cover page, abstract, table of contents, or reference/appendix pages), double-spaced with 1" margins in 12 size traditional font. APA 7th Edition must be utilized with all aspects of this paper. References must be current (2014 and later), (minimum of 3 references). Research

papers will be submitted through a TurnItIn link provided to you in Blackboard. All work must be original. The mini research paper grading rubric found on Blackboard provides additional detail. The Mini Research Paper is worth 25 points.

RESEARCH DESIGN PRESENTATION (15 POINTS)

You will prepare a research design presentation worth 15 points. See Blackboard for Research Design Presentation grading rubric.

Steps for completing this assignment:

1. Search for an article that displays an assigned research design from one of the following journals a) Behavior Analysis in Practice, b) Journal of Applied Behavior Analysis (JABA), c) Behavioral Interventions, or d) Education and Treatment of Children. Articles can be found on the online A&M-SA library for free by searching for articles using the PsycInfo database.
2. Submit your article to me prior to your presentation for approval or let me know during the second week after class
3. Read the article
4. Prepare a presentation that focuses on the purpose, methods, and results of the study.
5. Present the article in 8-10 minutes.

RESEARCH DESIGN PARTICIPATION (5 at 3 POINTS EACH)

On weeks 3-7, you will listen/watch to at least 1 of your peer's research design presentation for that week and comment. See Blackboard for the research design participation grading rubric. Research design participation will occur in Modules 3-7. Each week, Research Design Participation is worth 5 points for a total 15 points.

COURSE SCHEDULE

***All assignments are due by 11:59 pm CST on the date listed in the Course Schedule unless otherwise noted. The professor reserves the right to modify this course schedule as necessary to meet the needs of the students or professor during the semester. If changes are made, you will be notified of these changes on Blackboard. Additional readings and assignments may be assigned throughout the semester. Students must submit a good-faith effort attempt of all assignment to earn a grade of C or better. Failing to submit all assignments will result in a student earning a grade of C or lower.**

Week/ Date	Topic	Readings	Assignments
1	Selecting and Defining Behavior & Measuring Behavior	Higgins et al. (2023)	Quiz 1 (Due 3/22/2026)
2	Constructing and Interpreting Graphic Displays of Data	Review CH 6 Cooper Blair, & Mahoney, (2021).	Quiz 2 (Due 3/29/2026) Research article approval for presentation and mini research paper (Due 3/29/2026)
3	Reversal Design	Snyder et al. (2024) Review Ch 7 Cooper	Research Design Presentation (Due 4/5/2026) Research Design Participation (Due 4/5/2026) Quiz 3 (Due 4/5/2026) Introduction for mini research paper (Due 4/5/2026)
4	Multiple Baseline Design	Morin et al. (2024) Review Ch 8 Cooper	Research Design Presentation (Due 4/12/2026) Research Design Participation (Due 4/12/2026)

			Quiz 4 (Due 4/12/2026)
5	Multielement Design	Rispoli et al. (2014) Review Ch 8 Cooper	Research Design Presentation (Due 4/19/2026) Research Design Participation (Due 4/19/2026) Quiz 5 (Due 4/19/2026) Methods for mini research paper (Due 4/19/2026)
6	Changing Criterion Design	McDaniel & Bruhn (2016) Review Ch 9 Cooper	Research Design Presentation (Due 4/26/2026) Research Design Participation (Due 4/26/2026) Quiz 6 (Due 4/26/2026)
7	Planning and Evaluating ABA Research	Cooper et al. (2020) Chapter 10	Research Design Presentation (Due 5/3/2026) Research Design Participation (Due 5/3/2026) Results for mini research paper (Due 5/3/2026)
8	Wrap-Up		Mini-Research Paper (Due 5/10/2026)

COURSE POLICIES

Attendance

• Class attendance is monitored through timely online participation and posting. It is the responsibility of the student to assure that his/her presence has been noted
• Anyone not present online in the first week of class will be marked not present in the registrar's office and will be dropped from the class.
• Punctuality in submitting assignments and asking questions is expected as part of professional responsibility and courtesy.

Assignments

All assignments that are submitted via Blackboard must be submitted in a readable format on university computers. If you do not know how, please find out during the first week of class. See Submit Assignments.

Course Schedule

The instructor reserves the right to modify this course calendar as necessary to meet the needs of the students or instructor during the semester. If changes are made, you will be notified of these changes in class or via e-mail. Additional readings and assignments may be assigned throughout the semester.

Electronic Devices

Your participation in class is helpful to you and to your classmates. Please do not check social media during class time; this is an important aspect of professionalism. You are invited, however, to use your device to find resources that enhance our discussion.

Expected Quality of Work

Papers These requirements apply to any paper that is assigned, and that is to be completed outside of the classroom:
• Use of word processor to produce written assignments
• 1-inch margins
• APA 7th edition format (read the manual)
• Proofread paper for grammatical, mechanical, and spelling errors
• It is highly suggested that students using the Writing Center for assistance
• TurnItIn may be utilized for submitted papers

ABA majors must earn a grade of C or better on all graduate ABA courses.

Students must submit a good-faith effort attempt of all assignment to earn a grade of B or better. Failing to submit all assignments will result in a student earning a grade of C or lower.

Grading

Points	Description
6 at 5 points each = 30 points	Quizzes
3 at 5 points each = 15 points	Introduction, Methods, Results Assignments
15 points	Research Design Presentation
5 at 3 points each = 15 points	Research Design Participation
25 points	Mini Research Paper
100 points	Total Points Possible

Viewing Grades in Ultra

Points you receive for graded activities will be posted to the Grade Center. Include a statement about the timeframe of when to look for grades. Your instructor will update the online grades each time a grading session has been complete—typically 7 days following the completion of an activity.

Letter Grade Assignment

Include an explanation of the relationship between points earned and the final letter grade. **Example:** Final grades assigned for this course will be based on the percentage of total points earned and are assigned as follows:

Letter Grade	Percentage	Performance
A	90-100%	Excellent

B	80-89%	Good
C	70-79%	Average
D	60-69%	Passing
F	0-59%	Failing

Incomplete Grades

No grade of Incomplete will be issued. All material will be due by the end of class on the final day. Grades will be calculated on what has been turned in up to that point.

Important note: For more information about grading at A&M-SA, visit the grading section of the course catalog.

Late Work: Be sure to pay close attention to deadlines—there will be no make-up assignments or quizzes, or late work accepted without a serious and compelling reason and instructor approval.

Participation

Participation in class discussions is expected. Elements of appropriate participation include evidence of critical thinking, clarity in the identification of the issues, understanding of the problems, and ability to propose and evaluate solutions. It is expected that discussion in class will reflect reading related to the topic. All students are expected to welcome open expression of opinions, attitudes, and beliefs.

Plagiarism

Plagiarism is unacceptable and is not tolerated. Students found to plagiarize; including self-plagiarizing, will fail the assignment and be referred to The Office of Student Rights and Responsibilities.

Professionalism

Student involvement in classes is aimed at developing need skills and attributes that will enable them to productive and professional. It is expected that students will work on developing habits of punctuality, maturity, cooperation, initiative, enthusiasm, social sensitivity, and tactfulness. If you have a concern, problem, or questions, please schedule a time to meet with me for discussion. Should the issue require further attention you must follow the grievance policy.

Student Technical Skills Needed

Knowledge of computer skills including software applications (e.g., MS Word, PowerPoint, Blackboard, etc.) You are expected to be proficient with installing and using these basic computer skills and applications:

- Getting online
- Using an Internet browser. The IT department recommends Mozilla Firefox and Google Chrome.
- Downloading, saving, opening, and printing material found online.
- Conducting Internet searches.
- Email: You must have a working email account linked to Blackboard to ensure receipt of all course communication. You will be responsible for checking your email regularly for class-related announcements. Composing email/course messages and attaching documents. Need help? See Course Messages
- Blackboard: To participate in this course, you must have access to the internet and Blackboard. If the Blackboard site is not available, wait 15 minutes and try again. If your internet service is interrupted, it is your responsibility to locate a computer at a library, A&M-SA computer lab, internet cafe, copy shop, friend's house, etc. Extensions of due dates will not be given due to a lack of internet service at home. Therefore, you should never wait until the last minute to upload assignments, take quizzes and exams, etc. If you experience technical difficulties (that are not related to service interruption at home) at any point during the semester, please contact the Information Technology Services help desk for assistance http://www.tamusa.edu/its/index.html.
- Posting to a discussion forum. Need help? See Threads
- Submitting work to Blackboard. Need help? See How to Submit and Upload an Assignment
- Using Microsoft Office. Need the program? It's FREE for currently enrolled students. See Microsoft Office for Students.
- Taking online examinations.

Technology Requirements

It is expected that you have the following skills: sending/receiving emails, attaching documents to emails, creating tables, using Microsoft Word, PowerPoint, and submitting artifacts to Blackboard. However, if you are struggling with technology, please post your

questions on Questions & Coffee forum, or contact the Information Technology Services help desk http://www.tamusa.edu/its/index.html. In many cases, you can find answers to your question on Google or other search engines.

Generative AI

Intellectual honesty is vital to an academic community and for my fair evaluation of your work. Writing, analytical, and critical thinking skills are part of the learning outcomes of this course. Developing strong competencies in this area will prepare you for a competitive workplace. All work submitted on this course must be your own, completed in accordance with the University's academic regulations. You may not engage in unauthorized collaboration or make use of ChatGPT or other AI composition software. Assignments submitted through the course Turnitin platform in Blackboard will include AI detection as a part of the standard plagiarism screening.

UNIVERSITY POLICIES AND PROCEDURES

For Texas A&M University-San Antonio important policies and resources, see the document entitled "Important Policies and Resources."