ABA Graduate Certificate Program
PSY 550: Research in Applied Settings
Spring/Summer 2021

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Office hours:	By appointment	By appointment
Meeting location:	Online through Blackboard	

COURSE DESCRIPTION

This course focuses on behavioral research methodologies to evaluate interventions in applied settings. Students will be taught to use single-case study methodologies to assess various dimensions of behavior and to evaluate the effects of treatment interventions on those behaviors.

COURSE OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Describe rationale and process for evaluating interventions implemented in applied settings.
2. Understand the similarities and differences between single subject and group designs.
3. Select single-case designs based on a research or treatment question.
4. Use single-subject experimental design to develop methods to evaluate the effectiveness of interventions.
5. Explain the process of visual data analysis and interpret graphically represented data.
6. Demonstrate an understanding of ethical principles in research and treatment evaluation.
7. Analyze and draw inferences from applied research articles that depict the use of various treatment designs.

BACB 5th Edition Task List		
Learning Unit	**Task List Items**	**Content Hours**
Unit 1: Understanding and Using Experimental Control	D-1-4	15 hours
Unit 2: Measurement	C-1-9	
Unit 3: Reversal and Alternating Treatments Designs	C-10, D-5	15 hours
Unit 4: Multiple Baseline, Multiple Probe, and Changing Criterion	C-10, D-5	

Unit 5: Evaluating Single Subject Designs	C-11, D-6	15 hours
Unit 6: Interpreting and Presenting Data	C-10, C-11, D-5, D-6	

READING MATERIALS

Books:

Riley-Tillman, T.C., Burns, M.K., & Kilgus, S.P. (2020). *Evaluating educational interventions: Single Case Design for measuring Response to Intervention* (2nd ed.). New York, NY: Guilford Press.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2019). *Applied behavior analysis* (3rd ed.). Upper Saddle River, NJ: Pearson Education.

Required Equipment (owned or accessible)
- High-speed internet access
- Operating system that meets current Blackboard browser requirements (see below)
- Computer with a sound card and speakers
- Microphone (built in or external)
- Computer camera for synchronous meetings (most laptops have a camera)

Blackboard is the Course Management System
To access Blackboard, go to https://mybb.gvsu.edu/ and enter your network log in and password.

This course utilizes Blackboard, GVSU's online course management system. Take a look at the GVSU Online Learning pages to find numerous materials about using Blackboard and online learning http://www.gvsu.edu/online/.

Use of Blackboard is integral to this course and students must log on a few times each week in order to complete course requirements, receive important announcements and updates, and communicate with instructors and other students about course content.

Check the current technical requirements to use Blackboard and preferred browser information.

Technical difficulties with Blackboard
If you experience technical problems with Blackboard, contact the help desk by email or phone - helpdesk@gvsu.edu or 616-331-3513. The help website is http://www.gvsu.edu/it/learn/

Accessing the Library
Many of GVSU's library resources can be accessed online Distance and Off-Campus Learning Services with many journal articles available on demand. You must have an active GVSU student account to take advantage of the library's resources and services.

Some courses may have reading materials in course reserve. To access course reserve, [click here](#).

Writing Center
The [Graduate Writing Resources](#) available to assist with all kinds of writing tasks and they will give feedback on writing assignments. It is not just for students who struggle with writing. They can help any student improve writing skills.

Accommodations for Students with Disabilities
If you need specific accommodations and you have a documented disability, you will need to contact the [Disability Support Resources](#) Office to coordinate accommodations. If you plan to request accommodations in this course, please let me know right away so I can assist you.

BCBA Certification Information
This course is one of seven courses in the 21-credit Applied Behavior Analysis Graduate Certificate Program at GVSU. Successful completion of the course sequence results in the GVSU Graduate Certificate in Applied Behavior Analysis. The ABA Graduate Certificate is a Verified Course Sequence (VCS) by the Association of Behavior Analysis International (ABAI). The BACB has approved the GVSU course sequence as meeting the 5th edition Task List 315-hour coursework requirements for eligibility to pursue certification as a BCBA. Additionally, the BACB requires that you show proof of a master's degree and evidence that you have accrued the required number of supervised experience hours before you can register to take the BCBA exam. You are responsible for ensuring that you meet all of the current BACB standards. For more information about the Behavior Analyst Certification Board, go to www.bacb.com.

*Once you begin the ABA course sequence, you can start accumulating fieldwork experience hours.

Course Organization and Assignments

Learning Units (2-week modules)
The learning units will be a foundational part of the course and this is where you will find directions for each two-week segment of the course including reading assignments, content presentations, course materials, lesson activities, quizzes and assignments. Units will be posted on the starting date listed on the syllabus and will be open throughout the course.

Readings
You will have book chapters and articles associated with each unit module. It is critical to stay up on the readings. This is where you will learn much of the ABA terminology, which is cumulative over the course of the ABA sequence and is necessary for course exams and the BACB exam. In addition, you will be asked to find several research studies independently.

Synchronous Meetings (participate in 3 synchronous meetings)

Early in the course, we will have a synchronous meeting with everyone logging onto Zoom to get an introduction to the course. Subsequent synchronous meetings will provide an opportunity to talk about course materials and assignments. The dates and times for these meeting are listed in the syllabus.

Discussion Board Activities
You will have a discussion board activity for each unit. These activities may include responding to questions on a discussion board, reviewing and commenting on research articles, or having small group discussions using Zoom. More information on each activity will be provided with each unit.

Content Quizzes
At the end of each unit, you will complete a content quiz. There will be 6 quizzes, each worth 10 points. Quizzes will be completed in Blackboard. Each quiz will consist of a variety of forced-choice questions, and short-answer questions. The purpose of the quiz is to help you assess your knowledge of the content from the unit. Typically, you will have 30-60 minutes to take each quiz. Although each quiz is technically "open book," you are not given enough time to look up each answer, so be sure that you spend time preparing for the quiz prior to taking it. The quiz must be completed by the last Sunday (at midnight) of the learning unit. Be sure to read the instructions for each quiz, as the process may vary for specific quizzes.

Assignments
You will have 6 assignments to complete (1 for each unit). Most assignments are worth 20 points. More details about the individual assignments will be provided on Blackboard. All assignments must be prepared in a professional manner (typed, free from spelling/grammatical errors). Late assignments will only be accepted under extenuating circumstances. See late assignment policy.

Exams
There are two exams (midterm and final) in this class. Each exam is worth 40 points. You will be asked to use Respondus Lockdown when taking exams, and/or there may be other options available, depending on current circumstances. You may also have the exam proctored by another individual who fits the criteria (see directions on Blackboard). Exams will consist of a variety of questions.

Assignment	Points	Total Points for Semester
Discussion Board Activities (6)	5-10	40
Quizzes (6)	10	60
Assignments (6)	10-20	110
Exams (2)	40	80
TOTAL POINTS		290

Letter Grade	Percentage Range
A	94-100%
A-	90-93%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	70-76%
D	61-69%
F	0-60%

Additional Course Information

Late Assignment Policy

Late assignments are only accepted under extenuating circumstances. Be sure to allow ample time to complete the assignments (these are NOT assignments that can be completed the night before the due date!). You must contact the course instructor at least 24-hrs prior to the due date, and receive approval. All late assignments will receive a penalty of **2pts** per 24-hour period. You may only submit an assignment up to 5 days late (receive a 10-pt deduction).

Assignments more than 5 days late will receive no credit. Please contact me ASAP if you anticipate having a difficult time meeting the deadlines.

Learning Support and Assistance

I am devoted to supporting your learning in this class. We can schedule individual meetings via Zoom or another technology or have phone calls to discuss your questions. Please reach out to me if there is anything I can help you with.

GVSU Course Policies

This course is subject to the GVSU policies listed at http://www.gvsu.edu/coursepolicies/. Please familiarize yourself with these policies.

Academic Integrity

GVSU Student Code regarding Integrity of Scholarship and Grades:

Section 223.00: Integrity of Scholarships and Grades
Truth and Honesty. The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The University expects that both faculty and students will honor these principles, and in so doing protect the validity of University grades. This means that all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Instructors, for their part, will exercise care in the planning and supervision of academic work, so that honest effort will be positively encouraged.

Section 223.01: Plagiarism
Any ideas or material taken from another source for either written or oral presentation must be fully acknowledged. Offering the work of someone else as one's own is plagiarism. The language or ideas taken from another may range from isolated formulas, sentences, or paragraphs to entire articles copied from books, periodicals, speeches or the writings of other students. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgment also is considered plagiarism. Any student who fails to give credit in written or oral work for the ideas or materials that have been taken from another is guilty of plagiarism.

Assignment Due Dates		
		Due Date
Assignments	Assignment 1: Research Integrity Training CITI Training (note, this will take 6-8 hrs to complete, get started early in the semester)	Complete by June 6
	Assignment 2: Measurement	6/6
	Assignment 3: Research Proposal	6/20
	Assignment 4: Research Proposal	7/4
	Assignment 5: Visual Analysis	7/25
	Assignment 6: Program Evaluation	8/8
Discussion Board	Unit 1: Traditional	Initial response by May 16 Additional responses by May 23
	Unit 2: Traditional	Initial response by May 30 Additional responses by May 6
	Unit 3: Online group discussion	Sign up for one discussion group
	Unit 4: Online group discussio8n	Sign up for one discussion group
	Unit 5: Traditional	Initial response by July 18 Additional responses by July 25
	Unit 6: Traditional	Initial response by August 1 Additional responses by August 8
Quizzes	Quiz 1	5/23
	Quiz 2	6/6
	Quiz 3	6/20
	Quiz 4	7/4
	Quiz 5	7/25
	Quiz 6	8/8
Exams	Midterm Exam	Tuesday, 6/29
	Final Exam	Tuesday, 8/10

Course Schedule

Unit and Dates	Topics	Readings	Assignments
Unit 1: Understanding and Using Experimental Control 5/10 – 5/23	• Research integrity training • Research in Educational Settings • Defining features of SSD	• Hodgetts et al. (2011) • Slavin (2003) • Cooper (2019) – Ch. 7 • Riley-Tillman (2020) – pg. 7-11 + Ch. 2	• Assignment 1: Research Compliance/ CITI training (due by June 6th at the end of Unit 2) • Discussion Board Activity 1 • Quiz 1
Unit 2: Measurement 5/24 – 6/6	• Dimensions of measurement • Identifying measurement procedures • IOA	• Kazdin (2010) – Ch. 5 • Horner et al. (2005) • LeBlanc et al. (2016) • Fiske (2012) • Cooper (2019) – Ch. 5	• Assignment 2 • Discussion Board Activity 2 • Quiz 2
Unit 3: Reversal and Alternating Tx Designs 6/7 – 6/20	• Reversal design • Alternating treatments design • Graphing data	• Cooper (2019) – Ch. 8 • Riley-Tillman (2020) – Ch. 3 **For Graphing:** • Vanselow & Bourret (2012) • Deochand et al.(2015) • Dixon et al. (2009) • Barton & Reichow (2012)	• Assignment 3 • Discussion Board Activity 3 • Synchronous meeting • Quiz 3
EXAM 1: **Tuesday, June 29** **Take using Respondus Lockdown**			
Unit 4: Multiple Baseline, Multiple Probe and Changing Criterion 6/21 – 7/4	• Multiple baseline • Multiple Probe • Changing criterion • Graphing Data	• Cooper et al. (2019) – Ch. 9 • Riley-Tillman (2020) – Ch. 4	• Assignment 4 • Discussion Board Activity 4 • Synchronous Meeting • Quiz 4
Semester Break **7/5 – 7/11**			
Unit 5: Evaluating Single Subject Designs 7/12 – 7/25	• Visual analysis and interpretation of graphed data	• Riley-Tillman (2020) – Ch. 5 & Ch. 6	• Assignment 5 • Discussion Board Activity 5 • Quiz 5
Unit 6: Interpreting and Presenting Data 7/26 – 8/8	• Communicating findings • Research vs Case Studies • Social validity • Program evaluation	• Riley-Tillman (2020) – Ch. 8 • Wolf (1978) – social validity • Morrison & Harms (2018)- Ch. 5	• Assignment 6 • Discussion Board Activity 6 • Quiz 6
EXAM 2: **Tuesday, 8/10** **Take using Respondus Lockdown**			

Readings

Barton, E.E., & Reichow, B. (2012). Guidelines for graphing data with Microsoft Office 2007, Office 2010, and Office for Mac 2008 and 2011. *Journal of Early Intervention, 34*, 129-150.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2019). *Applied behavior analysis* (3rd ed.). Upper Saddle River, NJ: Pearson Education.

Deochand, N., Costello, M.S., & Fuqua, R.W. (2015). Phase-change lines, scale breaks, and trend lines using Excel 2013. *Journal of Applied Behavior Analysis, 48*, 478-493.

Dixon, M.R., Jackson, J.W., Small, S.L., Horner-King, M.J., Lik, N., Garcia, Y. & Rosales, R. (2009). Creating single-subject design graphs in Microsoft Excel 2007. *Journal of Applied Behavior Analysis, 42*, 277-293.

Fiske, K. & Delmolino, L. (2012). Use of discontinuous methods of data collection in behavioral intervention: Guidelines for practitioners. *Behavior Analysis in Practice, 5,* 77-81.

Hodgetts, S., Magill-Evans, J., Misiaszek, J.E. (2011). Weighted vests, stereotyped behaviors and arousal in children with autism. *Journal of Autism and Developmental Disorders, 41*, 805-814.

Horner, R.H., Carr, E.G., Halle, J., McGee, G., Odom, S., Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children, 71*, 165-179.

LeBlanc, L.A. Raetz, P.B., Sellers, T.P., & Carr, J.E. (2016). A proposed model for selecting measurement procedures for the assessment and treatment of problem behavior. *Behavior Analysis in Practice, 9,* 77-83.

Morrison, J.Q. & Harms, A.L. (2018). *Advancing Evidence-Based Practice through program evaluation: A practical guide for school-based professionals.* New York: Oxford University Press.

Riley-Tillman, T.C. & Burns, M.K., Kilgus, S.P. (2020). *Evaluating Educational interventions: Single-case design for measuring response to intervention.* (2nd edition). New York: Guilford Press.

Slavin, R.E. (2003). A reader's guide to scientifically based research: Using data to improve student achievement. *Educational Leadership, 60*, 12-16.

Vanselow, N.R., & Bourret, J.C. (2012). Online interactive tutorials for creating graphs with Excel 2007 or 2010. *Behavior Analysis in Practice, 5*, 40-46.

Wolf (1978). Social validity: The case for subjective measurement or How Applied Behavior Analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*, 203-214.