College of Education and Human Development
Division of Special Education and disAbility Research

Spring 2020
EDSE 621 004: Applied Behavior Analysis: Empirical Bases
CRN: 20380, 3 – Credits

Instructor: Kristy Park	**Meeting Dates**: 03/02/20 - 04/26/20
Phone: 703.993.5251	**Meeting Day(s)**: Online
Email: kparkc@gmu.edu	**Meeting Time(s)**: NA
Office Hours: email to schedule an appointment	**Meeting Location**: NA
Office Location: GMU Fairfax campus, Finley 100	**Other Phone**: N/A

*Note: This syllabus may change according to class needs. Teacher Candidates/Students will be advised of any changes immediately through George Mason email and/or through Blackboard.

Prerequisite(s): EDSE 619 B- (may be taken concurrently)

Course Overview
Focuses on basic content of applied behavior analysis. Teaches how to implement behavioral procedures and develop behavioral programs for clients with fundamental behavioral needs.

Course Delivery Method
Learning activities include the following:
1. Class lecture and discussion
2. Application activities
3. Small group activities and assignments
4. Video and other media supports
5. Research and presentation activities
6. Electronic supplements and activities via Blackboard

This course will be delivered online (76% or more) using an asynchronous format via the Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on [tbd].

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements
To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers
  To get a list of supported operation systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students may need a headset microphone for use with the Blackboard Collaborate web conferencing tool for small group collaborate sessions.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader: https://get.adobe.com/reader/
  - Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
  - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations
- Course Week:
  Because asynchronous courses do not have a "fixed" meeting day, our week will start on Tuesday, and finish on Monday.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least [#] times per week. In addition, students must log-in for all scheduled online synchronous meetings with your small group.
- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:

Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.

- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.

- Workload:
  Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.

- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.

- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.

- Accommodations:
  Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes
This course is designed to enable students to do the following:
1. Describe philosophical assumptions underlying data-based decision making in applied behavior analysis.
2. Define, describe, identify, exemplify, and use direct measures of behavior.
3. Define, describe, identify, exemplify, and use indirect measures of behavior.
4. Construct and interpret equal interval graphs.
5. Construct and interpret standard celeration charts.
6. Describe, identify, and exemplify single subject experimental design.
7. Describe and exemplify data-based decision making using visual inspection of graphically presented behavioral data in the context of single subject experimental designs.

8. Describe and identify utility and factors affecting use of single subject designs for evaluating instructional, behavioral, and other interventions in applied settings.
9. Read, interpret, and evaluate articles from the behavior analytic literature.

Professional Standards (Behavior Analyst Certification Board (BACB), Professional and Ethical Compliance Code for Behavior Analysts) The content of the course is derived from the Task List published by the national Behavior Analyst Certification Board (BACB) as well as the Professional and Ethical Compliance Code for Behavior Analysts. The Professional and Ethical Compliance Code for Behavior Analysts is listed on the following website: http://bacb.com/wp-content/uploads/2016/03/160321-compliance-code-english.pdf. For more information on the Board and the examination, please visit the Board's website at www.bacb.com.

Required Texts
Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Pearson Merrill Prentice Hall.

Foxx, R. M., & Mulick, J. A. (2015). *Controversial therapy for autism and intellectual disabilities: Fad, fashion, and science in professional practice* (2nd ed.). Routledge. https://doi.org/10.4324/9781315754345

Recommended Texts
American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). https://doi.org/10.1037/0000165-000

Required Resources
Go to the Behavior Analyst Certification Board website (www.bacb.com) and download the 4th edition Task List and the Disciplinary Standards as reference guides for this course.

Additional Readings
See Blackboard for additional readings for each week.

Course Performance Evaluation
Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

Assignments and Examinations

Final Exam: 50 points
This is a Performance-based Assessment. Tk20 submission is required.
A 50-item final exam is used to test knowledge of measurement, assessment, and experimental design concepts. Each question is worth 1 point and composed of multiple-choice questions and a graphing component. Given a data set, you will be asked to hand-graph the data and then interpret the results.

Each test question is correlated to the BACB Task List to help students identify strengths and weaknesses in the concepts related to empirical methods and research designs. After you complete the exam questions and submit your graphs, the instructor will provide a feedback form indicating your correct and incorrect responses. You must submit this feedback form provided by the professor onto the Assessment (Tk20) link within 24 hours.

Make Your Own Experiment: 60 points (2 @ 30 points each)
This is a Performance-based Assessment. Tk20 submission is required.
Both basic and applied research add to the field of behavior analysis. Experimental behavior analysis involves basic research designed to add to the knowledge about behavior, whereas applied behavior analysis focuses on the application of these behavior principles to real-world situations.

You will be given hypothetical scenarios, and you will choose one basic and one applied scenario. For each scenario, you will complete the following components:

- Develop a consent form,
- Develop a behavioral definition for the identified problem behavior,
- Provide a rationale for the selection of a measurement system,
- Create a recording form for collecting data on the problem behavior,
- Write clear and concise procedural steps for collecting data and obtaining interobserver reliability,
- Select a single subject design that will best answer the question asked,
- Write clear and concise procedural steps for how you will implement the design (i.e., baseline data collection, decision rule for introducing the intervention),
- Construct a graph of possible data that would show functional control of the intervention over the behavior.

As you identify, measure, and assess behaviors, you will incorporate ethical and professional guidelines outlined by the BACB. Scan the applied and basic projects into one document and submit in the assignment link AND onto the Assessment (Tk20) link.

Performance-based Common Assignments (No Tk20 submission required)
Discussion board (DB) prompts will be used to engage in discussions on course topics related to the text, Controversial Therapies, case studies, as well as other video course lectures. Below is a description of the DB prompts for this course.

Controversial Therapies DB: 64 points (8 @ 8 points each)
The Controversial Therapies DB requires you to read and interpret selected readings from the course text, *Controversial therapies for autism and intellectual disabilities: Fad, fashion, and science in professional practice* (Jacobson, Foxx, & Mulick, 2015) and reflect on the perspectives and experiences of your classmates. There are two components: an individual response and a follow-up reflection response. All students will respond individually to the DB prompt by Thursday at 11:55 p.m. (ET) of the assigned week. The follow-up response will be completed in small and large group formats. For the large group format, read the commentaries by your fellow peers and then respond to two of your classmates by Monday of the assigned week.

For small group posts, you will meet synchronously with your assigned classmates to discuss, compile, and complete the DB prompt. Small groups (assigned the first week) will have access to Blackboard Collaborate Ultra as a video conferencing tool. Schedule at least an hour to complete the task and **record** your small group session.

Submit your small group response by Monday of the assigned week. Small groups will be assigned in week 1.

- All initial individual discussion posts are due by Thursday of the assigned week at 11:55 p.m. (ET). Read the prompt and then use assigned readings, lectures, and other resources to provide evidence to your comments. Provide additional insight by incorporating work and personal experiences to connect course content with everyday life.
    o A good post will incorporate three parts: what do you know, what is the problem(s), barrier(s), or gap(s), and lastly, what are suggestions to address the gaps. For example, the text can be referenced to describe what is known about a topic area. Personal experiences can address the barriers in real-life application, and lastly, you can either provide suggestions to address the gap or solicit the opinion of classmates.
- All response posts are due by Monday of the assigned week at 11:55 p.m. (ET). For the large group post, read all of the posts submitted by your classmates and then respond to two of your classmates. For the small group post, meet with your group members synchronously, record session, and formulate a group response.

Couch to 5k: 64 points (8 @ 8 points each)
The Couch to 5k is a video log (VLOG) that follows a student's journey as she trains for her first running race. In this weekly activity, answer the discussion questions posted, and then engage in the practice activities related to direct observational skills. This assignment is worth 8 points per week; see rubric in appendix for point distribution.

The multimedia platform, VoiceThread, will be used for this assignment. You must join

the VoiceThread community created specifically for this course in Module 1. Follow the directions to click and join the VoiceThread group using the link provided.

CITI Module: 10 points
The CITI Program is an on-line training program on the principles, regulations, and rules governing the practice of research. Students will complete the Basic CITI Responsible Conduct of Research Module recommended for anyone conducting research at GMU. These modules are available through https://about.citiprogram.org/en/course/responsible-conduct-of-research-basic/. When you have completed the basic course modules, you will receive a Completion Report. Upload the certificate of completion in the assignment link.

Research Article Outline and Presentation: 32 points (2 @ 16 points each)
The purpose of this assignment is to review and interpret research articles from the behavior-analytic literature. Your task is to complete two article summaries and then create a video presentation of the main components for each article. The basic and applied research articles will be provided for you. The applied article, published from the Journal of Applied Behavior Analysis (JABA), is due week 5 and the basic article, published from the Journal of Experimental Analysis of Behavior (JEAB), is due week 6. There is a template to follow to complete the research outline. For the video presentation, present the following research components: participants, dependent variable and measurement, independent variable (intervention), single subject design, and results. Create a PowerPoint of the research components and then use Blackboard Kaltura or an alternative video platform to capture your presentation. Keep the video within 5 minutes in length.

Quiz: 80 points (4 @ 20 points each)
Quizzes designed to provide additional practice with course objectives in data collection, measurement, and graphing are located in Modules 2, 3, 4, and 7. Each quiz has one attempt, however, there is unlimited time restrictions.

- Quiz 1 includes multiple choice questions related to research basics. Guided notes and course text may be used during the quiz; however, it is an independent activity.
- Quiz 2 and 3 include videos for practice with observational skills.
- Quiz 4 requires you to construct an equal interval and cumulative graph. Given a data set, you will construct and plot the data with correct labels and phase lines.

Other Requirements

Attendance/Participation: 68 points total
This is an asynchronous course without designated meeting days; however, attendance and participation are required to receive full points on group assignments. Failure to meet with group members may result in the loss of points for that assignment.

Participation activities are located within the modules and include tasks and discussions related to course objectives. 1, 2, 5, 8, or 10 points are available for each of the activities, for a total of 68 points.

Late Work
Work is considered on time if it is submitted by 11:55 p.m. (ET) on the date that it is due. Work submitted after the assigned due date will be assessed a 10% point deduction per week after the assignment has been graded. Discussion Board posts and responses entered after the due date will be assessed a 50% point penalty.

Grading
Traditional rounding principles apply.

93-100% = A
90-92% = A-
87-89% = B+
83-86% = B
80-82% = B-
70-79% = C
< 70% = F

Assignment Type	Possible Points per instance	Number of Instances	Possible Points
Final Exam	50	1	50
MYOE (Applied and Basic)	30	2	60
DB: Controversial Therapies	8	8	64
DB: Couch to 5k	8	8	64
CITI Module	10	1	10
Research outline and presentation	16	2	32
Quizzes	20	4	80
Participation Activities **	*see below*	10	68
Total			**428**

**Participation Activities*	Point value
Module 1 Introduction discussion	8
Module 1 Evidence-based practice activity	10
Module 1 WIKI small group sign up	1
Module 2 Select and prioritize	2
Module 3 Create your own time sampling recording	10
Module 4 Standard celeration chart assignment	5
Module 5 JABA video discussion	8
Module 7 Research spotlight	8
Module 8 Research spotlight	8
Module 8 Reflection	8
Total	**68**

Professional Dispositions
Students are expected to exhibit professional behaviors and dispositions at all times. See
https://cehd.gmu.edu/students/polices-procedures/.

Note: The George Mason University Honor Code will be strictly enforced (see
https://oai.gmu.edu/ and https://catalog.gmu.edu/policies/honor-code-system/). Students are
responsible for reading and understanding the Code. "To promote a stronger sense of mutual
responsibility, respect, trust, and fairness among all members of the George Mason University
community and with the desire for greater academic and personal achievement, we, the student
members of the university community, have set forth this honor code: Student members of the
George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters
related to academic work." Work submitted must be your own new, original work for this course
or with proper citations.

Class Schedule
Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Week	Topics/Objectives	Readings and Assignments
	ABA refers to the Cooper, Heron, & Heward text *CT refers to the Foxx & Mulick (2015) text*	
1	ABA characteristics and philosophical assumptions Data-informed decision making and Evidence-based practice	ABA Chpt. 1 CT Chpt. 1 Evidence-based Practice DB: Intro, CT, Couch to 5k Quiz: Research Basics

2	Data Collection: Continuous measures of behavior	ABA Chpt. 3 & 4 CT Chpt. 2 CITI Module Due DB: Select & Prioritize, CT, Couch to 5k Quiz: Continuous data collection
3	Data Collection: Discontinuous measures of behavior	ABA Chpt. 4 & 5 CT Chpt. 3 DB: CT, Couch to 5k Quiz: Continuous data collection
4	Construct and Interpret Graphs / Standard Celeration	ABA Chpt. 6 CT Chpt. 26 Precision Teaching DB: CT, Couch to 5k Quiz 4: Graphing
5	Overview of research basics and introduction to Single Subject Designs	ABA Chpt. 7 & 10 CT Chpt. 11 Research Outline and Presentation (Applied) DB- Single subject questions, CT, Couch to 5k
6	Single Subject Research Designs: Reversals and Alternating Treatment Designs	ABA Chpt. 8 CT Chpt. 24 Research Outline and Presentation (Basic) DB: CT, Couch to 5k Research Spotlight: ADHD Quiz: Talk like a Behavior Analyst

7	Single Subject Research Designs: Multiple Baseline, Multiple Probe, and Changing Criterion Design	ABA Chpt. 9 CT Chpt. 15 and 16 DB: CT, Couch to 5k Research Spotlight: Compliance
8	Parametric/Component Analysis Evaluate and Design a Research Project	ABA Chpt. 10 CT Chpt. 28 DB: CT, Couch to 5k, Research Spotlight -Delayed SR+ Research Spotlight -Toilet Training MYOE Final Exam

Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).

- Students must follow the university policy for Responsible Use of Computing (see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see https://ds.gmu.edu/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources
- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/aero/tk20. Questions or concerns regarding use of Blackboard should be directed to https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:
- As a faculty member, I am designated as a "Responsible Employee," and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus.

- For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/students.

Appendix: Assessment Rubrics

Make Your Own Experiment

Declaration of Professional Practice (APPLIED and BASIC)	0-1	2	3
	• Any item is cut and pasted from an existing document This is considered by the instructor for referral for academic dishonesty • Written like a permission slip • Missing 2 or more critical elements • Declaration of Practice is missing	• Missing 1-2 elements of the consent form • Contains jargon or is difficult to understand • Declaration is completely in the student's own words	• Describes Self • Describes Working Style • Client Responsibilities • Code of Conduct • Confidentiality • Payment and Fees • Written at no higher than an 8th grade reading level
Informed Consent (BASIC Project Only)	0-1	2	3
	• Informed consent is missing • Created inappropriately • Written like a permission form • Contains only jargon • Does not give enough information for a reasonable person to make a decision • Is a consent form for services	• Informed consent missing 1-2 elements • Needs more detail to understand • Contains jargon or is written at too high a reading level • Is a consent to participate in the research project	• Outlines Purpose • Outlines Risks • Outlines Benefits • Outlines Alternatives • In enough detail for participant to understand • Written at no higher than an 8th grade level • Is a consent to participate in the research project
Operational Definition and	0-1	2	3-4

Measurement System			
	• Definition is not appropriate to the research question • Definition is too vague to collect reliable data • Data collection procedure inadequate • Sampling and measurement procedures are inaccurate • No data sheet provided • No IOA or treatment integrity	• Either operational definition has some explanatory fictions • Either definition does not pass the Dead Man test • Data collection is questionably appropriate • Not enough detail to show that student can carry out the data collection with fidelity • Either IOA or treatment integrity is missing • 1-2 errors in IOA or treatment integrity description	• Operational definition of dependent variable is in observable terms • Operational definition of independent variable is in observable terms • Avoids explanatory fictions • Passes the Dead Man Test • Measurement is Appropriate for Operational Definition • Rationale is provided for measurement system • Sampling and observation procedures are appropriate for the experiment • Materials are appropriate • Recording form provided for the paper • IOA is described • Decision rules are described for IOA • Treatment integrity form is created
Experimental Design	0-2	3-6	5-6

	• Procedure will not answer research question • Baseline not described • Not enough replications for functional control • Decision rules do not follow accepted practice in single-subject designs • Several threats to internal validity • No replication	• Experimental procedure is adequate for the research question • Some decision rules questionable • May be difficult to implement from the description provided (not enough detail) • Some threats to internal validity that might affect functional control	• Experimental design is appropriate to the research question • Baseline is described if appropriate • Decision rules for moving from one condition to another or counterbalancing are described • Description of how confounds are controlled for and functional control are described • Number of participants as well as replications are described
Graphing	0-1	2-3	4-5
	• Graph does not follow ABA conventions • Uses another graphing method than equal interval • Does not show functional control • Phase change lines are not created appropriately	• Graph is missing 1-2 ABA conventions • Shows ideal functional control • Phase change lines are created appropriately	• Sample graph is equal-interval • Follows ABA conventions for graphing • Phase change lines are created appropriately • Shows ideal functional control
Bibliography and APA Style	0	1	2
	• Replications are not cited or experiment is lifted from journals (instructor will take action re: academic honesty)	• Replications are cited • Citation style other than APA 7th edition is used	• Any replications are cited • APA 7th edition is used to format the paper and bibliography

	• No citations are used • No format of the paper	• 1-2 errors in APA Style	

Discussion Board Individual Post

	0-1	2-3	4
Individual post and peer response	• Completes some of the discussion postings, which show little or no evidence of statements or comments that match response to the DB prompt and/or posted late. • Peer response does not support or extend individual post.	• Completes most of the discussion postings which show evidence of statements or comments that match response to the DB prompt and posted on time. • Peer response somewhat supports or extends individual post.	• Completes all of the discussion postings, which display an understanding of the required readings and underlying concepts including correct use of terminology and posted on time. • Peer response supports or extends individual post.
Quality of post	• No response or response given does not match the prompt and/or observation and practice activity.	• Response given shows some evidence of matching the prompt and/or the observation and practice activity.	• Responses given show firm evidence of matching the prompt and/or the observation and practice activity.