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

Semester
EDSE 621 003: Applied Behavior Analysis: Empirical Bases
CRN 43118, 3 – Credits

Instructor: Dr. Mary Frances Paris	**Meeting Dates**: 6/24/19 – 8/18/19
Phone: 248-807-1546	**Meeting Day(s)**: Online
E-Mail: mparis5@gmu.edu	**Meeting Time(s)**: NA
Office Hours: Open-Contact by email	**Meeting Location**: NA
Office Location: Online	**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 e-mail and/or through Blackboard.

Prerequisite(s): 619 B-
Co-requisite(s): 619 May be taken concurrently.

Course Description
Focuses on basic content of applied behavior analysis. Teaches how to implement behavioral procedures and develop behavioral programs for clients with fundamental behavioral needs. Offered by Graduate School of Education. May not be repeated for credit.

Advising Contact Information
Please make sure that you are being advised on a regular basis as to your status and progress through your program. Mason M.Ed. and Certificate teacher candidates/students should contact Student Services at (703) 348-5006 (Option 2) for assistance.

Advising Tip
Have you met with an advisor? All students should make an appointment to meet with an advisor to outline a plan for completing coursework and non-course requirements such as testing. To make an appointment by phone or in person, go to http://gse.gmu.edu/special-education/advising/.

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 the Friday before the start of the course.

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
  Our course week will begin on the day that our synchronous meetings take place as indicated on the Schedule of Classes.
- 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 3 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

Upon completion of this course, teacher candidates/students will be able to:

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. Describe, identify, and exemplify ethical factors regarding data collection, data management, and data based decision making as described by the Guidelines for Responsible Conduct and the Disciplinary Standards.
10. Read, interpret, and evaluate articles from the behavior analytic literature.

Course Relationship to Program Goals and Professional Organizations

This course is part of the George Mason University, Graduate School of Education (GSE), Special Education Program for Applied Behavior Analysis Graduate Certificate. The content of the courses in this program 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 Textbooks

Cooper, J.O., Heron, T.E., & Heward, W.L. (2007). *Applied Behavior Analysis* (2nd Ed.). Upper Saddle River, New Jersey: 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 Edition). New York, New York: Routledge.

Recommended Textbooks

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

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).

Tk20 Performance-Based Assessment Submission Requirement
It is critical for the special education program to collect data on how our students are meeting accreditation standards. Every teacher candidate/student registered for an EDSE course with a required Performance-based Assessment (PBA) is required to upload the PBA to Tk20 (regardless of whether a course is an elective, a one-time course or part of an undergraduate minor). A PBA is a specific assignment, presentation, or project that best demonstrates one or more CEC, InTASC or other standard connected to the course. A PBA is evaluated in two ways. The first is for a grade, based on the instructor's grading rubric. The second is for program accreditation purposes. Your instructor will provide directions as to how to upload the PBA to Tk20.

For EDSE 621, the required PBA is Make Your Own Experiment and Final Exam Feedback. Please check to verify your ability to upload items to Tk20 before the PBA due date.

Assignments and/or Examinations

Performance-based Assessment (Tk20 submission required)
There are two TK20 submission required for this course.

1. **Final Exam**
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 students' correct and incorrect responses. You must submit this feedback form provided by the professor onto the Assessment (Tk20) link within 24 hours.

2. **Make Your Own Experiment**
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 focus on the application of these behavior principles to real-world situations.

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, etc.)
- 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.

College Wide Common Assessment (TK20 submission required)
None

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

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 2 components, an individual response and a follow up reflection response. All students will respond individually to the DB prompt by Thursday at 11:55 pm 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 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 pm (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.
    - A good post will incorporate 3 parts: what do you know, what is 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 pm (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

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. Each of these activities is worth 4 points each, for a total of 8 points.

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

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

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

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, *Talk Like a Behavior Analyst* quiz, requires you to meet in your small groups. Given a graph, you will visually interpret and describe experimental effect. Your peers will be evaluating your verbal performance using a checklist to rate quality of your visual analysis description.

Course Policies and Expectations

Attendance/Participation

This is an asynchronous course without designated meeting days, however; attendance and participation is required to receive full points on group

assignments. Failure to meet with group members may result in the loss of points for that assignment.

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

Grading Scale (traditional rounding principles apply)
93-100% = A
90-92% = A-
87-89% = B+
83-86% = B
80-82% = B-
70-79% = C
< 69% = F

*Note: The George Mason University Honor Code will be strictly enforced. 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 or with proper citations (see https://catalog.gmu.edu/policies/honor-code-system/).

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

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	ABA Chpt 1 CT Chpt 1 Evidence-based Practice DB: Intro, CT, Couch to 5k Quiz: Research Basics

	Evidence-based practice	
2	Data Collection: Continuous measures of behavior	ABA Chpt 3 & 4 CT Chpt 2 CITI Module Due Declaration of Professional Practice 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 Create recording tool 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, IES, 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 Cpt 28 DB: CT, Couch to 5k, IES 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 http://ods.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 http://coursessupport.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 Rubric(s)

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	• Informed consent missing 1-2 elements • Needs more detail to understand • Contains jargon or is written at	• Outlines Purpose • Outlines Risks • Outlines Benefits • Outlines Alternatives • In enough detail for participant to understand

	• Does not give enough information for a reasonable person to make a decision • Is a consent form for services	too high a reading level • Is a consent to participate in the research project	• Written at no higher than an 8th grade level • Is a consent to participate in the research project
Operational Definition and Measurement System	0-1	2	3-4
	• 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	• Replications are cited	• Any replications are cited • APA 6th edition is used to format the

	journals (instructor will take action re: academic honesty) • No citations are used • No format of the paper	• Citation style other than APA 6th edition is used • 1-2 errors in APA Style	paper and bibliography