



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

Spring 2016

EDSE 461 DL1: Analysis and Intervention in Applied Behavior Analysis

CRN: 18264, 3 - Credits

Instructor: Theodore A. Hoch, Ed.D., B.C.B.A.-D., L.B.A.	Meeting Dates: 01/25/16 - 05/9/16
Phone: 703-987-8928 / 703-993-5245	Meeting Day(s): Monday
E-Mail: thoch@gmu.edu Skype: drtheodorehoch	Meeting Time(s): 4:30 pm-7:10 pm
Office Hours: Available by phone, text, email, and skype most times; in person meetings available by appointment	Meeting Location: Blackboard Collaborate

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

Course Description

Teaches students basic data collection, presentation, and analysis as it pertains to applied behavior analysis; as well as procedures for determining intervention efficacy and selecting, developing, or modifying interventions based on data, in educational and other settings to satisfy part of the educational requirement to sit for the Board Certified Assistant Behavior Analyst (BCABA) examination.

Hours of Lecture or Seminar per week: 3

Hours of Lab or Studio per week: 0

Prerequisite(s): EDSE 460, or permission of instructor

Co-requisite(s): EDSE 460, or permission of instructor

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 students should contact the Special

Education Advising Office at (703) 993-3670 for assistance. All other students should refer to their faculty advisor.

Nature of Course Delivery

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

DELIVERY METHOD:

This course will be delivered online using a **synchronous** format via the Blackboard learning management system (LMS) housed in the MyMason portal. You will log in to the Blackboard course site using your Mason email name (everything before “@masonlive.gmu.edu) and email password. The course site will be available no later than 18 January 2016.

TECHNICAL REQUIREMENTS:

To participate in this course, students will need the following resources:

- High-speed Internet access with a standard up-to-date browser, either Google Chrome or Mozilla Firefox. Opera and Safari are not compatible with Blackboard;
- Consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course
- 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 the course requirements.
- The following software plug-ins for Pcs and Macs respectively, available for free downloading by clicking on the link next to each plug-in:
 - Adobe Acrobat Reader: <http://get.adobe.com/reader/>
 - Windows Media Player: <http://windows.microsoft.com/en-US/windows/downloads/windows-media-player>
 - Apple QuickTime Player: www.apple.com/quicktime/download/
- A headset microphone for use with the Blackboard Collaborate web conferencing tool

EXPECTATIONS:

- **Course Week:** Refer to the asynchronous bullet below if your course is asynchronous or the synchronous bullet if your course is synchronous.
 - **Synchronous:** Our course week will begin on the day that our synchronous meeting take place as indicated on the Schedule of Classes.

- **Log-in Frequency:** Refer to the asynchronous bullet below if your course is asynchronous or the synchronous bullet if your course is synchronous.
 - **Asynchronous:** Students must actively check the course Blackboard site and their GMU email for communications from the instructor, at a minimum this should be 2 times per week.
 - **Synchronous:** Students must log-in for all scheduled online synchronous meetings. In addition, students must actively check the course Blackboard site and their GMU email for communications from the instructor, at a minimum this should be 2 times per week.
- **Participation:** Students are expected to actively engage in all course activities throughout the semester, which include viewing of 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 are expected to seek assistance if they are struggling with technical components of the course. Contact ITU (<http://itservices.gmu.edu/help.cfm>) at (703) 993-8870 or support@gmu.edu.
- **Technical Issues:** Students should expect that they could experience some technical difficulties at some point in the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- **Workload:** Expect to log in to this course **at least three times a week** to read announcements, participate in the discussions, and work on course materials. Remember, this course is **not** self-paced. There are **specific deadlines** and **due dates** listed in the **CLASS SCHEDULE** section of this syllabus to which you are expected to adhere. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.

Netiquette: Our goal is to be **collaborative**, not combative. Experience shows that even an innocent remark in the online environment can be misconstrued. I suggest that you always re-read your responses carefully before you post them to encourage others from taking them as personal attacks. **Be positive in your approach to others and diplomatic with your words.** I will do the same. Remember, you are not competing with each other but sharing information and learning from one another as well as from the instructor.

Learner Outcomes

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

- Describe how informed consent is obtained within ethical and legal standards.
- Describe rationale for conducting a functional assessment and for conducting a functional analysis.

- Describe procedures for conducting a functional assessment.
- Interpret functional assessment data.
- Describe procedures for conducting a functional analysis.
- Interpret functional analysis data.
- Collect behavioral data using direct and indirect measures.
- Construct and interpret graphs of behavioral data.
- Describe and identify various single subject design methods.
- Interpret single subject design data and literature.

Required Textbooks

Cooper, J.O., Heron, T.E., & Heward, W.L. (2007). *Applied behavior analysis (2nd Ed.)*. Upper Saddle River, NJ: Pearson Merrill Prentice Hall. ISBN 0-13-142113-1. (Note: You probably purchased this for EDSE 460, and so will not need to purchase this book again.)

O'Neill, R.E., Albin, R.W., Storey, K., Horner, R.H., & Sprague, J.R. (2014). *Functional assessment and program development for problem behavior: A practical handbook. (3rd Ed.)* Stamford, CT: Cengage Learning. ISBN 9781285734828.

Digital Library

Effective summer 2015, the Division of Special Education and disAbility Research will discontinue the use of the Pearson Digital Library. No further registrations will be accepted. Students who hold current subscriptions will continue to have access to the library for the remainder of their subscription time. However, no further updates will be made to the digital library. During this time, should a textbook be revised or a new book is adopted for a class where the text is included in the digital library, Pearson will have options available to you and will provide you with an individual e-text or, if there is no e-text, a printed copy. Students, who have purchased a 3-year subscription directly through Pearson Education, will also have an option to obtain a prorated refund. However, 3-year subscription access cards purchased via the GMU bookstore will need to speak with a George Mason Bookstore Representative. Please be aware that the issuance of a refund, in this case, is at the discretion of the George Mason bookstore. Concerns or questions may be directed to Molly Haines at Molly.Haines@pearson.com.

Recommended Textbooks

None.

Required Resources

Given the possibility of computer or internet difficulties some students may experience

from time to time, students must consider and identify alternative availability of computers and internet access (e.g., public libraries, their employer (if permissible by the employer), internet cafes, etc.) within the first week of this course to ensure that they will be able to complete their assignments in a timely manner.

Your computer access must include a working webcam and working microphone. You will need to use your webcam and microphone in every class session. Attending a class session without a working webcam or working microphone will result in loss of one attendance point for that class session.

You will need earbuds or headphones to use with your computer during online class sessions. This will present nasty feedback that can occur when your microphone is on and sound is coming through your speakers.

Students will need to scan multiple pages into single documents at several points during this course. Uploading multiple single page documents to comprise an assignment is not acceptable; instead, pages must be scanned into a single document, and uploaded as a single, multipage document. Students must secure scanner access that will permit such scanning, and it is strongly recommended that students identify back-up scanning access, should the first identified scanning access become unavailable.

Additional Readings

None.

Course Relationships 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. This program complies with the standards for teacher licensure established by the Council for Exceptional Children (CEC), the major special education professional organization. The CEC Standards are listed on the following website:

<http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/ProfessionalStandards/>. 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 Board's Guidelines for Responsible Conduct. The BACB Standards are listed on the following website: For more information on the Board and the examination, please visit the Board's website at www.bacb.com.

GMU Policies and Resources for Students:

a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/the-mason-honor-code/>].

- b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>].
- c. Students are responsible for the content of university communications sent to their George Mason University 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.
- d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- e. Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services and inform their instructor, in writing, as soon as possible. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor. <http://ods.gmu.edu/>.
- f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

Professional Dispositions

Students are expected to exhibit professional behaviors and dispositions at all times.

Core Values Commitment

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

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See <http://gse.gmu.edu/>]

Course Policies & Expectations

Attendance.

You are expected to attend each class session and to participate in each class discussion. If you have questions, ask them. If you have a response to another student's question, offer it. If you have a comment, make it. You will only learn by doing, and the

more you do in class, the more opportunities you'll have to learn. Your instructor will take attendance at the beginning of class (at 4:30 pm, promptly), and those students who are present and whose microphones and webcams are working will earn one point at that time; those present but with a non-functioning webcam and/or microphone will earn ½ point; those not present during the attendance check will earn 0 points. Similar, students staying for the entire class session will earn a second point; those staying for the entire class session but with a nonfunctioning microphone and / or webcam will earn ½ point; and those leaving before the end of the class session will earn 0 points. *Attendance and Class Discussion points cannot be made up. A total of 28 points are possible through reliable attendance. Missed attendance points cannot be made up. Students missing a class session must consult with their classmates for notes or other materials missed during the missed session.*

Late Work.

Work submitted more than two weeks after the original due date will be assessed a 10% possible point penalty. No work will be accepted after the final exam has been taken.

Tk20 Performance-Based Assessment Submission Requirement

Every student registered for any Special Education course with a required performance-based assessment is required to submit the (*NO ASSESSMENT REQUIRED FOR THIS COURSE*) to Tk20 through Blackboard (regardless of whether the student is taking the course as an elective, a onetime course or as part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in Tk20 through Blackboard. Failure to submit the assessment to Tk20 (through Blackboard) will result in the course instructor reporting the course grade as Incomplete (IN). Unless the IN grade is changed upon completion of the required Tk20 submission, the IN will convert to an F nine weeks into the following semester.

Grading Scale

Assignment Type	Possible Points Each	Number	Total Points Possible
Attendance/Participation	2 / session	14 sessions	28 points
Problem Sets 1-7, 10	10 each	8 sets	80 points
Problem Set 8	65 points	1 set	65 points
Problem Set 9	20 points	1 set	20 points
Project Presentation	5 points	1 time	5 points

Final Exam	50 points	1 exam	50 points
Total			248 points
A = 223 - 248 pts	B = 198 - 222 pts	C = 174 – 197 pts	D = 149 – 173 pts
F < 149 pts			

Assignments

Performance-based Assessment (TK20 submission required).

Behavior Intervention Program Development and Evaluation Project. To pull together all you have learned in this course, you will develop a behavioral treatment program that includes data collection, graphing, and parent / instructional staff training procedures, in addition to the behavioral or instructional procedures themselves. You will be provided with a completed functional assessment. From this, you will do the following:

1. Write an operational definition for the behavior to be decreased. (5 points possible)
2. Develop a measurement system for this behavior. You will need to write step by step instructions on how to collect data on the behavior, and develop and include a data collection form. (5 points possible – 1 for selection of appropriate measure, 1 for thoroughness of data collection instructions, 1 for clarity of data collection instructions, 1 for thoroughness of recording form, and 1 for clarity of recording form)
You will submit 1 and 2 together as Problem Set 4. 10 points are possible on Problem Set 4.
3. Analyze the functional assessment interview provided to you and:
 - a. Determine consequences likely maintaining the problem behavior (2 points possible)
 - b. Determine the type of contingency (e.g., positive reinforcement, negative reinforcement, etc.) likely maintaining the problem behavior (2 points possible)
 - c. Determine the settings, people in whose presence, times of day, and days of week when the behavior is most and least likely to occur (4 points possible)
 - d. Determine an alternative behavior already exhibited by the person that would be a suitable replacement for the problem behavior (1 point)
 - e. Determine alternative behavior not already exhibited by the person, but which the person could be taught, that would be a suitable replacement for the problem behavior (1 point)

4. Develop an operational definition for the potential alternative behavior you list in 3d (1 point possible)
5. Develop a measurement system for your potential alternative behavior listed in 3d. Must include data collection instructions and a recording form.(4 points possible)
6. Develop an operational definition for the potential alternative behavior you list in 3e (1 point possible)
7. Develop a measurement system for your potential alternative behavior you list in 3e. Must include data collection instructions and a recording form. (4 points possible)
8. Complete a competing behavior model diagram for the functional assessment and the potential alternative behaviors you've selected (15 points possible)
9. From your competing behavior model diagram, select one MO variable, one immediate antecedent variable, and one consequence variable to address, for purposes of decreasing the identified problem behavior and increasing either your alternative behavior from 3d or your alternative behavior from 3e.
 - a. Write Preventive / Preparatory procedures (your MO intervention), in step-by-step, task analysis fashion, explaining to the implementer (e.g., parent or instructional staff person) exactly what to do, when (10 points possible – 4 for thoroughness of instructions, 4 for clarity of instructions, and 2 for logical order of instructions)
 - b. Repeat, for your Instructional Procedures (e.g., intervention targeting the SDs for the problem behavior, and SDs for the alternative behavior you've selected). (10 points possible – 4 for thoroughness of instructions, 4 for clarity of instructions, and 2 for logical order of instructions)
 - c. Repeat, for your Consequence Procedures (e.g., intervention targeting the contingency / contingencies you identified as maintaining the problem behavior, and those you're arranging or enhancing to promote the alternative behavior). (10 points possible – 4 for thoroughness of instructions, 4 for clarity of instructions, and 2 for logical order of instructions)

You will submit 3 – 9 as Problem Set 8. A total of 65 points are possible for Problem Set 8.

10. Write staff / parent training guidelines, explaining how you will accomplish competency-based staff / parent training. Explain which personnel (based only on information contained in the FAI) you would include in the training, and how you would structure the training, as well as reliability and integrity checks. (10 points possible – 6 for thoroughness of training structure outlined, 2 for reliability checking procedures, and 2 for integrity checking procedures).

You will submit 10 and 13 (below) as Problem Set 9. A total of 20 points are possible for Problem Set 9.

11. Select the experimental design that would best examine instructional or treatment efficacy. Why that design is the best for the circumstances and question to be answered (2 points), how you would accomplish it given your procedures, implementers, and circumstances (6 points), and how you would control for threats to internal validity (2 points).
12. Write data review and data-based decision making guidelines, explaining how you will examine the data (and with what frequency) (4 points), and how to determine whether condition change is necessary or whether to continue the current course, or to introduce new treatment or instructional procedures or implementers (4 points). Ensure that your guidelines comport to the design you selected in number 11.

You will submit 11 and 12 as Problem Set 10. A total of 10 points is possible for Problem Set 10.

13. Develop a generality plan, which explains how you would assure a sufficient range of responses, occurring in a sufficient range of circumstances, and would maintain over time. (10 points possible – 4 for how you would establish setting/stimulus generality, 4 for how you would establish response generality, and 2 for how you would ensure and assess maintenance).

You will submit 10 (above) and 13 as Problem Set 9.

On the last day of class you will present your project to the class (5 points)

Final Examination. This test will consist of 50 items, and will be given as a pretest on the first night of class, and as a final exam on the last night of class. Credit toward your final score will only be given for your performance on this test on the last night of class. After scoring the pretest, your instructor will provide you with a breakdown of your scores per content area addressed by the test. When taken as a final exam, a total of up to 50 points will be possible.

Performance-based Common Assignments (No TK20 submission required).

Problem Sets 1 – 3 and 5 – 7. These six problem sets are designed to provide additional practice applying data collection, presentation, and interpretation, and design implementation procedures and strategies discussed in class. These will be exercises will often involve accessing web-based video material and collecting data on what one observes. Each of these Problem Sets is worth 10 total possible points.

Other Assignments.

Extra Credit – Behavioral Development Solutions Modules. Students who would like to purchase the Behavior Analyst Certification Exam study software from Behavior Development Solutions (www.behaviordevelopmentsolutions.com) may do so. Those who do, and who complete the following modules and submit to their instructor documentation of completion will receive 10 points of extra credit for each module completed. Modules you may complete for extra credit for this course are:

Experimental Evaluation of Interventions

Measurement of Behavior

Displaying and Interpreting Behavioral Data

Extra Credit – Professional Workshops and Conferences. Students may earn 5 points extra credit per 1 day of attendance at any of the following:

- Association for Professional Behavior Analysts Convention, to be held 31 March – 2 April in Washington, D.C. Students will attend at their own expense, and must provide documentation demonstrating their attendance, or must check in with Dr. Hoch at the conference, for each day of attendance. More information is available at www.apbahome.net.
- Virginia Association for Behavior Analysis Conference, to be held on 15 and 16 April in Newport News, VA. Students will attend at their own expense, and must provide documentation demonstrating their attendance, or must check in with Dr. Hoch at the conference, for each day of attendance. More information available at www.virginiaaba.org.
- Attendance at the verbal behavior workshop presented by Dr. Mark Sundberg on the Prince William Campus of George Mason University on 5 and 6 May. Students will attend at their own expense, and must check in with Dr. Hoch at the workshop. More information will be made available in late January or early February.

Extra Credit – Procedures. Students may earn extra credit for writing step-by-step instructions for an implementer to use in conducting any of the following procedures:

- Conducting a trial based functional analysis.
- Conducting a positive reinforcement procedure and conducting a negative reinforcement procedure.
- Collecting partial interval sampling data, whole interval sampling data, and momentary time sampling data.

- Conducting an assessment of a parent's giving correct instructions, prompts, and consequences.

To do this extra credit assignment, please discuss this with your professor no later than three weeks before the end of the course. This extra credit assignment will be due no later than at the time of your final exam. You may write procedures for any one, two, three, or all four of these options, for up to five points per option exercised.

ONLY UP TO 20 POINTS OF EXTRA CREDIT WILL BE APPLIED TO YOUR POINT TOTAL FOR YOUR FINAL GRADE.

Schedule

In this table, ABA refers to the Cooper, Heron, & Heward text, and FA to the O'Neill et al. text. NLT means "no later than."

Date	Topic / Objectives	Assignments Due / Activities
1/25/16 1 st Ssn	Orientation to Course / Review Syllabus / Pretest	<input type="checkbox"/> Take Pretest
2/1/16 2 nd Ssn	Defining Behavior and Direct Measures	<input type="checkbox"/> Read ABA Ch 1 and 2 <input type="checkbox"/> Review consent, confidentiality, and documentation guidelines <input type="checkbox"/> Practice operationally defining behavior <input type="checkbox"/> Practice measuring behavior
2/8/16 3 rd Ssn	Indirect Measures	<input type="checkbox"/> Read ABA pp. 81-82, 85-87, 90-100 <input type="checkbox"/> Submit Problem Set 1 NLT beginning of class <input type="checkbox"/> Practice measuring behavior
2/15/16 4 th Ssn	Graphing Data and Interpreting Graphs	<input type="checkbox"/> Read ABA Ch 6 <input type="checkbox"/> Submit Problem Set 2 NLT beginning of class <input type="checkbox"/> Practice Graphing & Visual Inspection of Data
2/22/16 5 th Ssn	Using Data to Figure Things Out	<input type="checkbox"/> Read ABA Ch 7 <input type="checkbox"/> Submit Problem Set 3 NLT beginning of class <input type="checkbox"/> Practice and Discuss Uses of Data and Data-Based Decision Making

2/29/16 6 th Ssn	Withdrawal Designs and Alternating Treatment Designs	<input type="checkbox"/> Read ABA Ch 8 <input type="checkbox"/> Submit Problem Set 4 NLT beginning of class (Note: this is Steps 1 and 2 for your TK20 Assignment) <input type="checkbox"/> Lecture, discussion, and practice with withdrawal and alternating treatment designs
3/14/16 7 th Ssn	Multiple Baseline and Changing Criterion Designs	<input type="checkbox"/> Read ABA Ch 9 <input type="checkbox"/> Submit Problem Set 5 NLT beginning of class <input type="checkbox"/> Lecture, discussion, and practice with multiple baseline and changing criterion designs.
3/21/16 8 th Ssn	Experimental Functional Analysis and Functional Analysis Driven Instruction or Treatment	<input type="checkbox"/> Read ABA Ch 24 <input type="checkbox"/> Submit Problem Set 6 NLT beginning of class <input type="checkbox"/> Lecture, discussion, and practice with experimental functional analysis and FA driven procedural selection
3/28/16 9 th Ssn	Functional Assessment and Functional Assessment Driven Instruction or Treatment	<input type="checkbox"/> Read FA pp. 1-84 <input type="checkbox"/> Submit Problem Set 7 NLT beginning of class <input type="checkbox"/> Discussion and practice with FAI, competing behavior model, and selecting or developing interventions based on competing behavior model.
4/4/16 10 th Ssn	More Functional Assessment and Functional Analysis – figuring out what to do! Functional Skills Assessment – Using the AFLS and other instruments	<input type="checkbox"/> Read ABA Ch 28 <input type="checkbox"/> Lecture, discussion, and practice on planning for generality
4/11/16 11 th Ssn	Functional Skills Assessment – Using the AFLS and other instruments Assessing parent and staff skills and parent training	<input type="checkbox"/> Submit Problem Set 8 at beginning of class (Note: this is steps 3 – 9 of your Signature Assignment) <input type="checkbox"/> Lecture, discussion, and practice on competency based training
4/18/16 12 th Ssn	Assessment-Driven Intervention, and Evaluating Instructional Efficacy and Making Data-Based Decisions	<input type="checkbox"/> Submit Problem Set 9 NLT beginning of class (Note: this is steps 10 and 13 of your TK20 Assignment)

		<input type="checkbox"/> Additional discussion and practice on data-based decision making and determining intervention efficacy
4/25/16 13 th Ssn	Empirically Supported Interventions and Research in Applied Behavior Analysis	<input type="checkbox"/> Submit Problem Set 10 at beginning of class
5/2/16 14 th Ssn	Peer Review, Presentations, and Review	<input type="checkbox"/> Participate in peer-review of colleagues' proposed interventions and procedures
5/9/16 15 th Ssn	Final Examination	