

SYLLABUS
GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
APPLIED BEHAVIOR ANALYSIS CERTIFICATE PROGRAM
EDSE 621 5S3 / PSYCH 621

Empirical Bases of Applied Behavior Analysis
Fall 2010

Thursdays 7:20 pm – 10:00 pm
Room 113, Kellar Annex II, 10396 Democracy Lane, Fairfax, VA 22030

PROFESSOR

NAME	Theodore A. Hoch, Ed.D., B.C.B.A. Assistant Professor, College of Education and Human Development
OFFICE	Room 107, Kellar Annex II
PHONE	703.993.5245 / 703.987.8928
EMAIL ADDRESS	thoch@gmu.edu
OFFICE HOURS	Tuesday and Thursday, 2:30 – 4:30, and by appointment

COURSE DESCRIPTION

- A Prerequisites.** Prior completion of EDSE 619 / Psych 619, or concurrent registration in either of those courses.
- B Course description.** This course focuses on the basic content of applied behavior analysis and teaches course participants to implement behavioral procedures and develop behavioral programs for clients with fundamental behavioral needs. More specifically, this course focuses on the empirical bases of applied behavior analysis. These are data-based decision making and determining procedural efficacy through single-subject experimental designs. Additionally, we will discuss ethical issues as they pertain to collecting, using, reporting, and storing data; and to experimental design in clinical, educational, and experimental work.

NATURE OF COURSE DELIVERY

Lecture, discussion, written assignments, written assessments, and asynchronous online discussion.

STUDENT OUTCOMES and PROFESSIONAL STANDARDS

This course addresses the Council on Exceptional Children's Standard #8 (Assessment), which reads as follows:

Assessment is integral to the decision-making and teaching of special educators and special educators use multiple types of assessment information for a variety of educational decisions. Special educators use the results of assessments to help identify exceptional learning needs and to develop and implement individualized instructional programs, as well as to adjust instruction in response to ongoing learning progress. Special educators understand the legal policies and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction, and placement for individuals with ELN, including those from culturally and linguistically diverse backgrounds. Special educators understand measurement theory and practices for addressing issues of validity, reliability, norms, bias, and interpretation of assessment results. In addition, special educators understand the appropriate use and limitations of various types of assessments.

Special educators collaborate with families and other colleagues to assure non-biased, meaningful assessments and decision-making. Special educators conduct formal and informal assessments of behavior, learning, achievement, and environments to design learning experiences that support the growth and development of individuals with ELN. Special educators use assessment information to identify supports and adaptations required for individuals with ELN to access the general curriculum and to participate in school, system, and statewide assessment programs. Special educators regularly monitor the progress of individuals with ELN in general and special curricula. Special educators use appropriate technologies to support their assessments.

REQUIRED TEXTS

- Bailey, J.S., & Burch, M.B. (2005). *Ethics for behavior analysts*. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-5118-6.
- 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
- Jacobson, J.W., Foxx, R.M., & Mulick, J.A. (2005). *Controversial therapies for developmental disabilities: Fad, fashion, and science in professional practice*. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-4192-X.

RECOMMENDED MATERIALS

BCBA Examination Study software, available through Behavior Development Solutions at <http://www.behaviordevelopmentsolutions.com/>. (Please wait until after the first class session to purchase this software.)

ARTICLES

The following articles may be downloaded from the Journal of Applied Behavior Analysis website. There is a link to this website at External Links at this course's Blackboard page.

- Allen, K.D., & Evans, J.H. (2001). Exposure based treatment to control excessive blood glucose monitoring. *Journal of Applied Behavior Analysis*, 34 (4), 497-500.
- daCosta, L.G., Rapoff, M.A., Lemanek, K., & Goldstein, G.L. (1997). Improving adherence to medication regimens for children with asthma, and its effect on clinical outcome. *Journal of Applied Behavior Analysis*, 30 (4), 687-691.
- Engleman, K.K., Altus, D.E., & Matthews, R.M. (1999). Increasing engagement in daily activities by older adults with dementia. *Journal of Applied Behavior Analysis*, 32 (1), 107-110.
- Gillat, A., & Sulzer-Azaroff, B. (1994). Promoting principals' managerial involvement in instructional improvement. *Journal of Applied Behavior Analysis*, 27 (1), 115-129.
- Hanley, G.P., Iwata, B.A., Thompson, R.H., & Lindberg, J.S. (2000). A component analysis of "stereotypy as reinforcement" for alternative behavior. *Journal of Applied Behavior Analysis*, 33 (3), 285-297.
- Heck, A., Collins, J., & Peterson, L. (2001). Decreasing children's risk taking on the playground. *Journal of Applied Behavior Analysis*, 34 (3), 349-352.

McGonigle, J.J., Rojahn, J., Dixon, J., & Strain, P.S. (1987). Multiple treatment interference in the alternating treatments design as a function of the intercomponent interval length. *Journal of Applied Behavior Analysis, 20* (2), 171-178.

Osborne, K., Rudrud, E., & Zezoney, F. (1990). Improved curveball hitting through the enhancement of verbal cues. *Journal of Applied Behavior Analysis, 23* (5), 371-377.

The following articles may be downloaded from E-Reserve at the GMU Library website. There is a link to this website at this course's Blackboard page under External Links. Once there, please choose E-Reserve, this course, and your instructor's name. **THE E-RESERVE PASSWORD FOR THIS COURSE IS actions – all lower case.**

Blake, D.D., Owens, M.D., and Keane, T.M. (1990). Increasing group attendance on a psychiatric unit: An alternating treatments design comparison. *Journal of Behavior Therapy and Experimental Psychiatry, 21* (1), 15-20.

Botella, C., Banos, R.M., Villa, H., Perpina, C., & Garcia-Palacios, A. (2000). Virtual reality in the treatment of claustrophobic fear: A controlled, multiple baseline design. *Behavior Therapy, 31* (3), 583-595.

Buisson, G.J., Murdock, J.Y., Reynolds, K.E., & Cronin, M.E. (1995). Effects of tokens on response latency of students with hearing impairments in a resource room. *Education and Treatment of Children, 18* (4), 408-421.

Dermer, M.L., & Hoch, T.A. (1999). Improving descriptions of single-subject experiments in research texts written for undergraduates. *Psychological Record, 49* (1), 49-66.

DeZubicaray, G., & Clair, A. (1998). An evaluation of differential reinforcement of other behavior, differential reinforcement of incompatible behavior, and restitution for the management of aggressive behaviors. *Behavioral Interventions, 13* (1), 157-168.

Dixon, M.R. (2000). Manipulating the illusion of control: Variations in gambling as a function of perceived control over chance outcomes. *Psychological Record, 50* (4), 705-719.

Dudley, L.L., Johnson, C., & Barnes, R.S. (2002). Decreasing rumination using a starchy food procedure. *Behavioral Interventions, 17* (1), 21-29.

Fordyce, W.E., Shelton, J.L., & Dundove, D.E. (1982). The modification of avoidance learning pain behaviors. *Journal of Behavioral Medicine, 5* (4), 405-414.

Himadi, B., & Curran, J.P. (1995). The modification of auditory hallucinations. *Behavioral Interventions, 10* (1), 33-47.

Himadi, B., Osteen, F., Kaiser, A.J., & Daniel, K. (1991). Assessment of delusional beliefs during the modification of delusional verbalizations. *Behavioral Residential Treatment, 6* (5), 355-366.

Hoch, T.A., Babbitt, R.L., Farrar-Schneider, D., Berkowitz, M.J., Owens, J.C., Knight, T.L., Snyder, A.M., Rizol, L.M., & Wise, D.T. (2001). Empirical examination of a multicomponent treatment for pediatric food refusal. *Education and Treatment of Children, 24* (2), 176-198.

Iwata, B.A., Duncan, B.A., Zarcone, J.R., Lerman, D.C., & Shore, B.A. (1994). A sequential, test-

controlled methodology for conducting functional analyses of self-injurious behavior. *Behavior Modification*, 18 (3), 289-306.

Ludwig, T.D., & Geller, E.S. (1999). Behavioral impact of a corporate driving policy; Undesirable side effects reflect countercontrol. *Journal of Behavioral Medicine*, 19 (2), 25-34.

Myaard, M.J., Crawford, C., Jackson, M., & Alessi, G. (2000). Applying behavior analysis within the wraparound process: A multiple baseline study. *Journal of Emotional and Behavioral Disorders*, 8 (4), 216-229.

Newman, B., Needleman, M., Reinecke, D.R., & Robek, A. (2002). The effect of providing choices on skill acquisition and competing behavior of children with autism during discrete trial instruction. *Behavioral Interventions*, 17 (1), 31-41.

Rhymer, K.N., Dittmer, K.I., Skinner, C.H., & Jackson, B. (2000). Effectiveness of a multicomponent treatment for improving mathematics fluency. *School Psychology Quarterly*, 15 (1), 40-51.

Sindelar, P.T., Rosenberg, M.S., & Wilson, R.J. (1985). An adapted alternating treatments design for instructional research. *Education and Treatment of Children*, 8 (1), 67-76.

Skinner, C.H., Skinner, A.L., & Armstrong, K.J. (2000). Analysis of a client-staff developed program designed to enhance reading persistence in an adult diagnosed with schizophrenia. *Psychiatric Rehabilitation Journal*, 24 (1), 52-57.

Thiele, T., Blew, P., & Luiselli, J.K. (2001). Antecedent control of sleep-awakening disruption. *Research in Developmental Disabilities*, 22 (5), 399-406.

Ward, P., Smith, S., & Sharpe, T. (1997). The effects of accountability on task accomplishment in collegiate football. *Journal of Teaching Physical Education*, 17 (1), 40-51.

Watson, J.E., Singh, N.N., & Winton, A.S. (1985). Comparing interventions using the alternating treatments design. *Behaviour Change*, 2 (1), 13-20.

Wolfe, D.A., & Sandler, J. (1981). Training abusive parents in effective child management. *Behavior Modification*, 5 (3), 320-335.

Woods, D.W., & Twohig, M.P. (2002). Using habit reversal to treat chronic vocal tic disorder in children. *Behavioral Interventions*, 17 (3), 159-168.

ADDITIONAL TEXT MATERIAL

You will need a copy of the Behavior Analyst Certification Board's *Task List* and *Guidelines for Responsible Conduct*. Download both from the Board's website at www.bacb.com.

COURSE REQUIREMENTS, PERFORMANCE-BASED ASSESSMENT, AND EVALUATION CRITERIA

Requirements and Performance-Based Assessment

Blackboard Discussion Board Items. For weeks indicated below, in conjunction with your readings from *Controversial therapies for developmental disabilities*, respond to the week's two Discussion Board items. To respond, first do the assigned reading, Next, go to the week's Discussion Board items on Blackboard. Read your instructor's question and your classmates' responses. Respond directly to the your instructor's question, or to

content posted by your classmates. Posts must be made prior to the start time for the assigned class session. You will earn 2 points for each post made on time. Late posts will earn 1 point.

Class Discussion. You are expected 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 behaving, and the more do in class, the more opportunities you'll have for your behavior to be shaped.

Problem Sets. You will complete these per instructions contained on each problem set, and submit them at the beginning of the sessions for which they are indicated as due in the schedule below. A total of 10 points is possible for each correctly completed Problem Set submitted on time; up to 9 points for those submitted late. ***Incorrect responses may be corrected and resubmitted once, for up to ½ credit for each corrected response.*** Corrected problem sets will be accepted up to the time of the final examination; none will be accepted afterward.

SAFMEDS Demonstrations. At the beginning of each class session, you will privately demonstrate fluency with the SAFMEDS terms assigned for that week by responding correctly to each card within the specified time limit. Ten points are earned for responding correctly to all cards within the specified time limit; nine points for responding correctly to each card in more than the specified amount of time.

Research Worksheets. The Research Worksheet outline will be available on Blackboard, in Course Documents. You will complete three research worksheets for articles listed in the reading list. Research worksheets are due no later than at the beginning of the course sessions indicated below. Worksheets turned in on time or early can earn a total of 10 possible points each; those turned in late can earn up to 9 points each.

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.

Grading Scale

<u>Assignment Type</u>	<u>Possible Points Each</u>	<u>Number</u>	<u>Total Possible Points for Assignment Type</u>
Discussion Board Items	2 / Item	28 Items	56 points
Problem Sets	10 / set	8 sets	80 points
Research Worksheets	10 / worksheet	3 worksheets	30 points
SAFMEDS Demonstrations	10 / session	13 sessions	130 points
Final Exam	50 points	1 exam	<u>50 points</u>
			336 points

A = 303 – 336 points B = 270 - 302 points C = 227 - 270 points F < 227 points

Extra Credit. Completing the following Behavior Development Solutions modules:

- ❖ Experimental Evaluation of Interventions
- ❖ Measurement of Behavior

and e-mailing or hand delivering to your instructor your instructor the certificates of completion for each of these modules will earn 10 points of extra credit per certificate submitted.

Schedule

In the table below, ABA refers to the Cooper, Heron, and Heward text (*Applied Behavior Analysis*), Ethics to the *Ethics for Behavior Analysts* text, and CT refers to the *Controversial Therapies* text.

Date	Topic / Objectives	Assignments Due / Activities
9.2.10 Week 1	Review Syllabus Pretest	
9.9.10 Week 2	Introduction to Single-subject design	Read <u>CT</u> Ch 1 and 2; Respond to Discussion Board Items 1 and 2; Read <u>Ethics</u> Preface & Ch 1-3 Read <u>ABA</u> Ch 1, pp. 65 – 69 Do SAFMEDS list 1 – 15 correct in 30 sec
9.16.10 Week 3	Measurement – Why bother? Direct Measures of Behavior: count, cumulative count, duration, rate, latency, interresponse time, extensity, intensity	Read <u>CT</u> Ch 3 and 4; Respond to Discussion Board Items 3 and 4 on Blackboard Read <u>ABA</u> pp. 73 – 80, 83 - 90 Read <u>Ethics</u> pp. 38-39, 65-67 Do SAFMEDS list 2 – 15 correct in 30 sec
9.23.10 Week 4	Measurement – Indirect Measures of Behavior: accuracy, intensity, trials to criterion, percentage, percentage occurrence, percentage intervals occurrence, permanent products, and other estimates; Selecting appropriate measures; General data collection issues	Problem Set 1 Due Read <u>CT</u> Ch 5 and 6; Respond to Discussion Board Items 5 and 6 on Blackboard Read <u>ABA</u> pp. 81 – 82, 85 – 87, 90 – 100 Do SAFMEDS list 3 – 15 correct in 30 sec
9.30.10 Week 5	Data Management: Graphic data display and graph preparation; maintaining data tables; data summary; equal interval graphs; cumulative count graphs; standard celeration charts	Problem Set 2 Due Read <u>CT</u> Ch 7 and 8; Respond to Discussion Board items 7 and 8 on Blackboard Read <u>ABA</u> Ch 6 Do SAFMEDS list 4 – 15 correct in 30 sec
10.7.10 Week 6	General Issues in Measurement	Problem Set 3 Due Read <u>CT</u> Ch 9 and 10; Respond to Discussion Board Items 9 and 10 on Blackboard; <u>Ethics</u> pp. 60-64, 68-69 Read <u>ABA</u> Ch 7 Do SAFMEDS list 5 – 15 correct in 30 sec
10.14.10 Week 7	Withdrawal Designs (AB, ABA, ABAB, BAB, etc.); Component Analysis; Parametric Analysis	Problem Set 4 Due Read <u>CT</u> Ch 11 and 12; Respond to Discussion Board Items 11 and 12 on Blackboard Read <u>ABA</u> pp. 177 – 186 Do SAFMEDS list 6 – 15 correct in 30 sec
10.21.10 Week 8	Alternating Treatments Designs	Problem Set 5 Due Read <u>CT</u> Ch 13 and 14; Respond to Discussion Board Items 13 and 14 on Blackboard Read <u>ABA</u> pp. 187 - 194; Watson et al. (1985), Sindelar et al. (1985), & McGonigle et al. (1987) Do SAFMEDS list 7 – 15 correct in 30 sec
10.28.10 Week 9	Multiple Baseline Designs	Problem Set 6 Due Read <u>CT</u> Ch 15 and 16; Respond to Discussion Board Items 15 and 16 on Blackboard Read <u>ABA</u> Ch 9 Do SAFMEDS list 8 – 15 correct in 30 sec

Date	Topic / Objectives	Assignments Due / Activities
11.4.10 Week 10	General Issues in Measurement and Experimental Design	Problem Set 7 Due Read <u>CI</u> Ch 17 and 18; Respond to Discussion Board Items 17 and 18 on Blackboard Read <u>ABA</u> Ch 5, 10 Do SAFMEDS list 9 – 15 correct in 30 sec
11.11.10 Week 11	Incorporating experimental design into clinical, educational, business, or other work	Problem Set 8 Due Read <u>CI</u> Ch 19 and 20; Respond to Discussion Board Items 19 and 20 on Blackboard Do SAFMEDS list 10 – 15 correct in 30 sec
11.18.10 Week 12	Make Your Own Experiment Week!	Read <u>CI</u> Ch 21 and 22; respond to Discussion Board Items 21 and 22 on Blackboard
12.2.10 Week 13	Reading Experimental / Applied Experimental Work and Developing a research project	Read <u>CI</u> chapters 23 and 24; respond to Discussion Board Items 23 and 24 on Blackboard Prepare and submit three research worksheets; present one research worksheet to class
12.9.10 Week 14	Measuring psychiatric symptoms and medication effects Review course objectives	Read <u>CI</u> Chapters 25 and 26; Respond to Discussion Board Items 25 and 26 on Blackboard Read <u>Ethics</u> Chapters 10 & 12
12.16.10 Week 15	Final Exam	EXTRA CREDIT! Read <u>CI</u> Chapters 27 and 28; Respond to Discussion Board Items 27 and 28 on Blackboard

Contacting Your Instructor

You may contact Dr. Hoch by phone at 703.993.5245 (office), or, if he is not available in his office and the matter is urgent, by cell at 703.987.8928. You may also e-mail Dr. Hoch at thoch@tmu.edu, or drop by his office at 107 Kellar Annex II.

Use of Computers and Communication Equipment in Class

Although laptop computers can be used for note taking during class, they have sometimes been used for purposes incompatible with instruction in the past, and their use may annoy others in the class. For this reason, unless it is part of a class sanctioned activity, laptop computers must be turned off and put away during class. Likewise, cell phones and other communication devices can distract their users and the user’s classmates, as well. These, too, must be turned off and put away during class.

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS

All students will activate their George Mason University e-mail accounts. All e-mail communication pertaining to this course will be via GMU e-mail.

All students will receive feedback on their final exam performance by e-mail the day after the final exam is taken, along with a Signature Assignment document. Students will then submit the Signature Assignment document sent to them by e-mail to Taskstream on receipt of the document. No student’s final grade will be submitted until the Signature Assignment document has been received by Taskstream and your instructor has received e-mail notification of this from Taskstream.

Every student registered for any EDSE course as of the Fall 2007 semester is required to submit signature assignments to TaskStream (regardless of whether a course is an elective, a one-time course, or part of an undergraduate minor). TaskStream information is available at <http://gse.gmu.edu/programs/sped/>. Failure to submit the Signature Assignment to TaskStream will result in the course instructor reporting the course grade as Incomplete (IN). Unless this grade is changed upon completion of the required TaskStream submission, the IN will convert to an F nine weeks into the following semester.

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

The Graduate School of Education (GSE) expects that all students abide by the following:

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code.
See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing.
See <http://mail.gmu.edu> and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Office of Disability Services (ODS) and inform the instructor, in writing, at the beginning of the semester. See <http://www2.gmu.edu/dpt/unilife/ods/> or call 703-993-2474 to access the ODS.

Students will refrain from consuming intoxicating substances in any quantity on the day of class, prior to or during class. Any student suspected of having consumed intoxicants will be asked to leave class. The student will be asked to arrange for transportation away from the Campus that does not involve the student operating a motor vehicle. Participation in this course indicates that the student understands and agrees to refrain from consuming intoxicants in any quantity on class days prior to or during class, to leave class at the request of the instructor if the instructor has reason to believe the student has consumed intoxicants, and to arrange for transportation away from campus that does not involve the student operating a motor vehicle.